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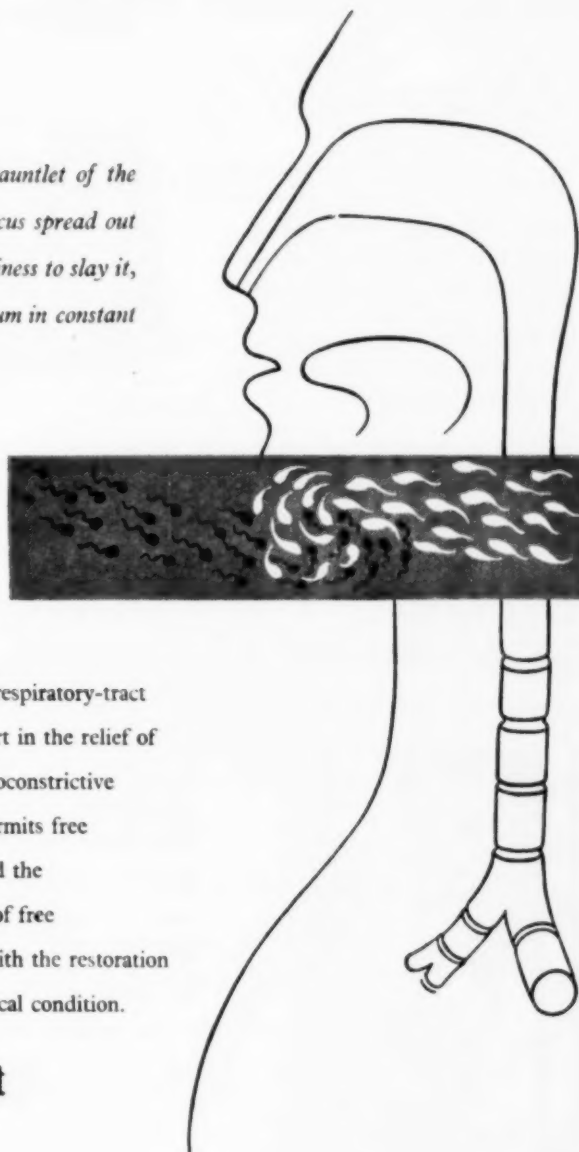
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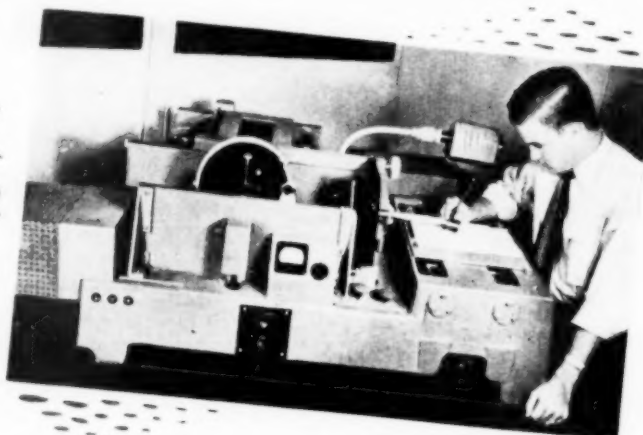
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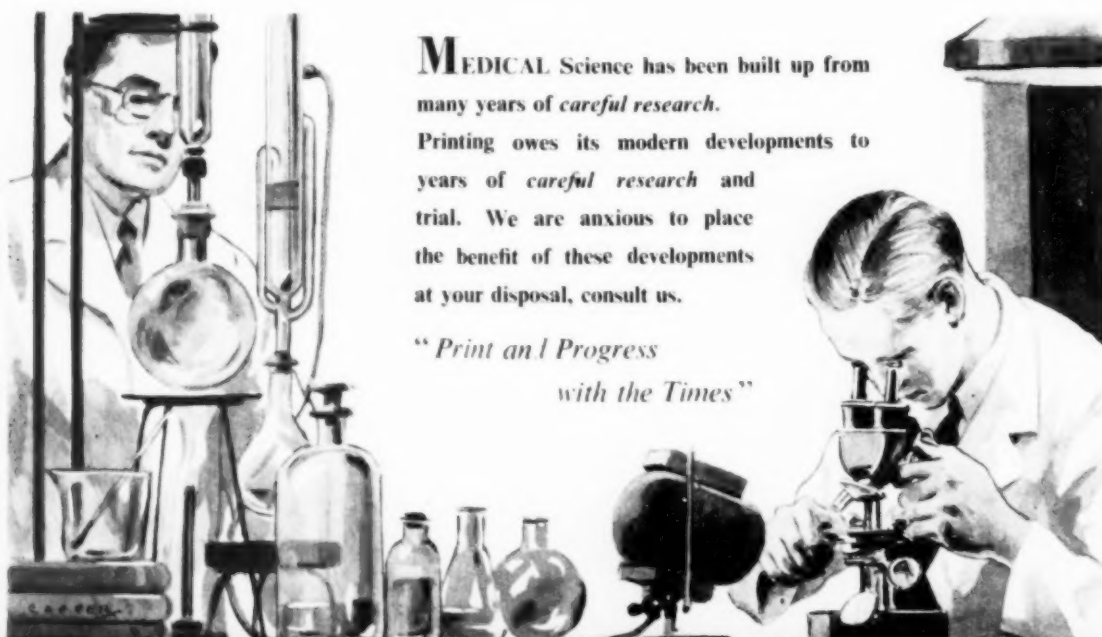
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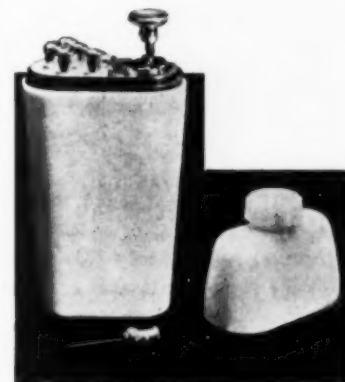
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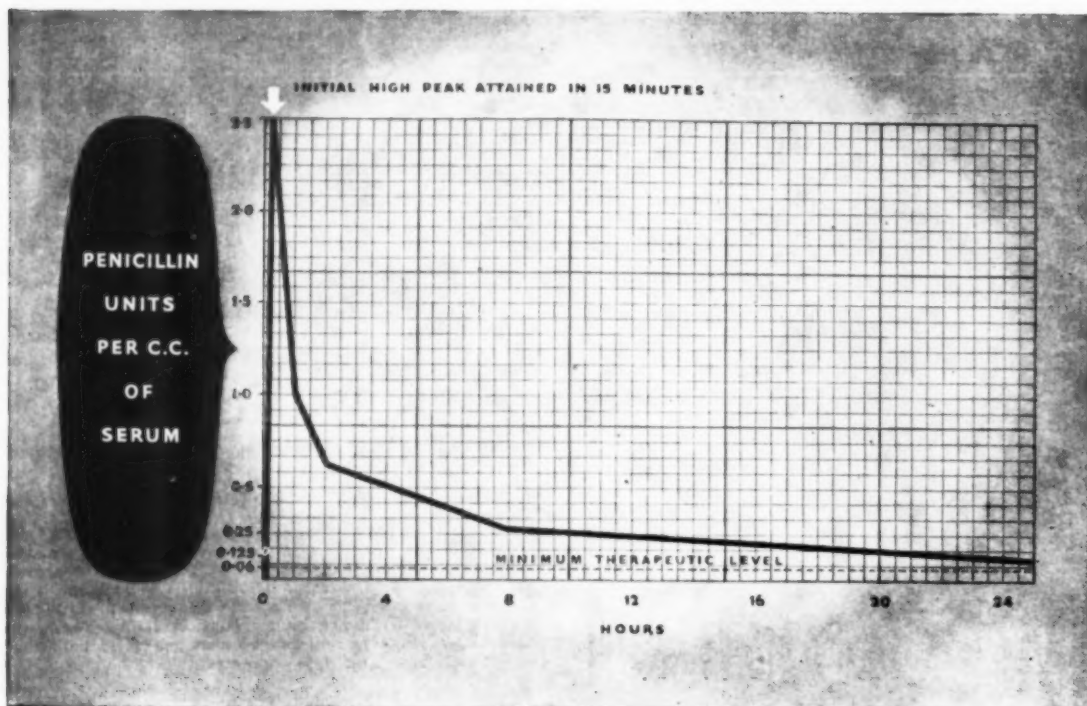
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BRONCHOGENIC CARCINOMA

A REVIEW ILLUSTRATED BY 100 CASES

DAVID ADLER, M.B. (CAPE TOWN), F.R.C.S. (EDIN.)

and

DENIS FULLER, F.R.C.S. (ENG.)

Thoracic Surgical Unit, Johannesburg

Bronchogenic carcinoma, commonly called carcinoma of the lung, is to-day the most common malignant visceral tumour in males¹; yet, apart from one or two references to single cases,^{2,3} there has been no review in the South African medical literature since the advent of thoracic surgery has converted a hopeless medical problem into a hopeful surgical solution.

This article is based on a paper delivered in January 1951 to the Southern Transvaal Branch of the Medical Association on the first 100 consecutive cases of bronchogenic carcinoma seen by us privately in Johannesburg in the preceding 4 years. Publication has been delayed to allow a more adequate follow-up of the cases illustrating the review.

Tables I-IX reflect a statistical analysis of the 100 cases.

AETIOLOGY

1. *Age.* Bronchogenic carcinoma is essentially a disease of later life. Whereas most reported cases occurred between the ages of 45 and 55, our series showed a preponderance between 50 and 70 years (Table I). A case, however, has been described by Hauser⁴ in a child of 5½ months.

2. *Sex.* Bronchogenic carcinoma is stated to be 8 to 4 times commoner amongst males than females. Of our 100 cases only 12 were females (Table 2).

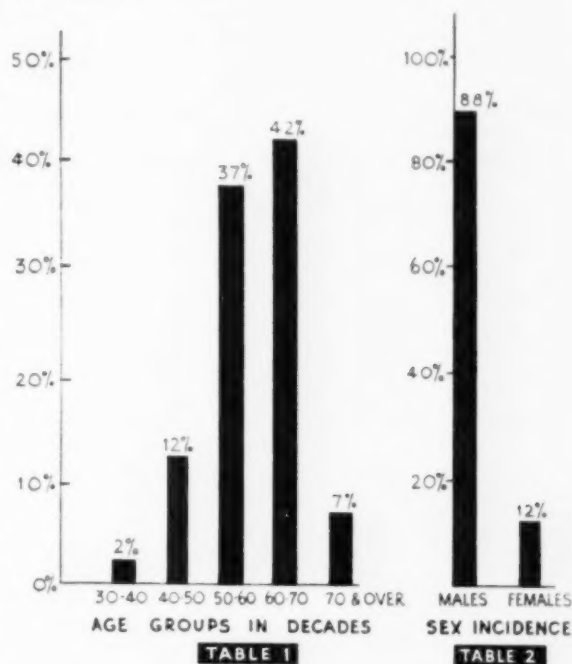
3. As haematogenous secondaries and local invasion can occur in adenoma some believe that adeno-carcinomas develop in a pre-existent adenoma. We have had no such cases and this article excludes bronchial adenoma.

4. Pulmonary adenomatosis (alveolar-cell carcinoma), a rare primary malignancy of the lung, bears no relation to bronchogenic carcinoma. We have had only one such case.

5. There is but scanty evidence that preceding bronchial diseases, e.g. tubercle or bronchiectasis are aetiological factors.

6. *Influenza.* It was suggested at one time that as a result of metaplasia in the bronchial epithelium accom-

panying influenza, carcinoma would be more frequent. If this is so it must be long-delayed, for Iceland, which suffered a severe pandemic in 1919, has an exceptionally low incidence.



7. *Pneumoconioses.* At the Miners' Phthisis Bureau the incidence of bronchogenic carcinoma was found to be no higher in silicotic miners than in those who had never worked underground. Deibert,⁵ supporting the suggestion that the increase of carcinoma is due to environment, notes that the majority of new occupational cancers affect the

respiratory system; e.g. those caused by chromates, asbestos, arsenicals, radio-active gases and dust, nickel, carbonyl and lubricating oil. The Schneeberg carcinoma, occurring in cobalt mine workers in Saxony in a very high proportion, is probably due to the presence of radio-active arsenic and bismuth, for in other cobalt mines the incidence of carcinoma is normal.

8. *Tobacco.* Reinhold⁶ in 1947 stated, 'It will be interesting, now that women are smoking, to see if the much higher ratio of lung malignancy in men is decreased by an increase in the incidence in women'. Perry⁷ suggested in 1947 that cigarettes may be carcinogenic by virtue of their arsenic content. Wynder and Graham⁸ in a careful statistical survey of bronchogenic carcinoma in the United States concluded:

(a) Excessive and prolonged use of tobacco seems to be an important factor in bronchogenic carcinoma.

(b) Of 605 men with bronchogenic carcinoma 96.5% were 'heavy' smokers. Of 780 controls with other diseases among the general male hospital population without cancer only 73.7% smoked heavily.

(c) 51% of these cases with bronchogenic carcinoma were 'excessive' smokers; 19.1% of the same control group in the general hospital population as above were excessive smokers.

(d) Only 1.3% of bronchogenic carcinoma cases occur in male non-smokers or minimal smokers.

(e) 96.1% of men with bronchogenic carcinoma had smoked heavily for over 20 years. Perhaps the reason for the lesser incidence amongst women is that few have smoked for so long.

(f) Smoking seems to be related to squamous carcinoma.

Dungal⁹ points out that whereas in most other civilized countries lung carcinoma to-day is considered to be almost as common as gastric carcinomas, in Iceland it is ninth on the list. He feels that this low incidence is related to the low consumption of tobacco per head, which is only a quarter of that in Great Britain.

Doll and Hill,¹⁰ in a well-documented statistical survey of 709 hospital cases of bronchogenic carcinoma in London compared with a similar group of 709 cases of diseases other than cancer, conclude that smoking is an important factor in the production of carcinoma of the lung. They said, 'The figures obtained are admittedly speculative, but suggest that, above the age of 45 the risk of developing the disease increases in simple proportion with the amount smoked, and that it may be approximately 50 times as great among those who smoke 25 or more cigarettes a day as among non-smokers.'

In another comprehensive article following a 4-year

investigation into nearly 5,000 hospital cases in England the same authors¹¹ make a comparison between 1,465 patients with carcinoma of the lung and an equal number of 'matched control' patients with other disease, each of these being carefully chosen so as to be of the same age, the same sex, and, as far as possible, in the same hospital at the same time as a lung-carcinoma patient. No appreciable difference was found between the two groups based on social class, occupation or vicinity to gas works or other exposure to fumes. Of 1,357 men with carcinoma of the lung only 7—i.e. 0.5%—were non-smokers, compared to 65—i.e. 4.5%—in the paired controls. Of the men with lung carcinoma 25.0% reported that they had been smoking an average of 25 or more cigarettes a day (or the equivalent in pipe tobacco) compared with only 13.4% in the male controls.

We have records of 70 male cases, of whom 63 were heavy smokers—i.e. more than 25 cigarettes daily—and only 7 were non-smokers.

It is said that the reader of an American magazine was so disturbed by an article on the subject of smoking and cancer that he decided to give up reading!

INCIDENCE

We have seen an average of 25 new cases each year in private and approximately twice that number each year at the General Hospital.* Price¹² in his text-book of medicine, in 1934 devoted only 2 pages to new growths of the lungs. Brock¹³ in 1943 stated: 'Less than a generation ago primary carcinoma of the lungs was thought to be a rare curiosity; to-day it is recognized as a most common condition.'

As a profession we must realize its frequency. In Britain¹³ 1.5% of carcinoma deaths in males were in 1920 due to bronchogenic carcinoma whereas in 1947 the proportion had risen to 19.7%. Brockbank¹⁴ points out that the number of certified deaths from lung carcinoma in Manchester rose from 156 in 1937 to 283 in 1949. Fulton¹⁵ (1949) shows that in Liverpool there are 200 cases per annum per million of population, and that bronchogenic carcinoma comprises 10% of all new cancer cases. Heady and Kennaway¹⁶ show the rise in the certification of deaths from bronchogenic cancer since 1900.

* The hospital cases are not included in this survey as unfortunately the available data are insufficient.

Fig. 1. Localized mass found during barium meal screening. Surgery advised but doctor, on radiologist's advice, decided against thoracotomy.

Fig. 2. This shows progress of this mass after 8 months.

Fig. 3. X-ray of a man aged 41 whose doctor advised a chest X-ray because of clubbing found during routine examination for 'flu'. Thoracotomy showed hilar invasion with localized peripheral mass seen behind the right 4th rib.

Fig. 4. X-ray showing infiltrative carcinoma in the right lower lobe. A man aged 67 who had a productive suppurative haemorrhagic bronchiectasis for many years, exacerbation of cough with repetitive haemoptyses necessitating this X-ray.

Fig. 5. Right lateral of Fig. 4 with infiltration posteriorly.

Fig. 6. This X-ray of a female of 39 with severe shoulder pain and no chest symptoms shows a Pancoast's lesion with erosion of the third rib.

Fig. 7. X-ray shows complete atelectasis of the left lung in a male aged 57 who experienced a wheeze in the left chest (due to partial obstruction and treated as asthma) followed by sudden dyspnoea and disappearance of the wheeze (due to complete obstruction).

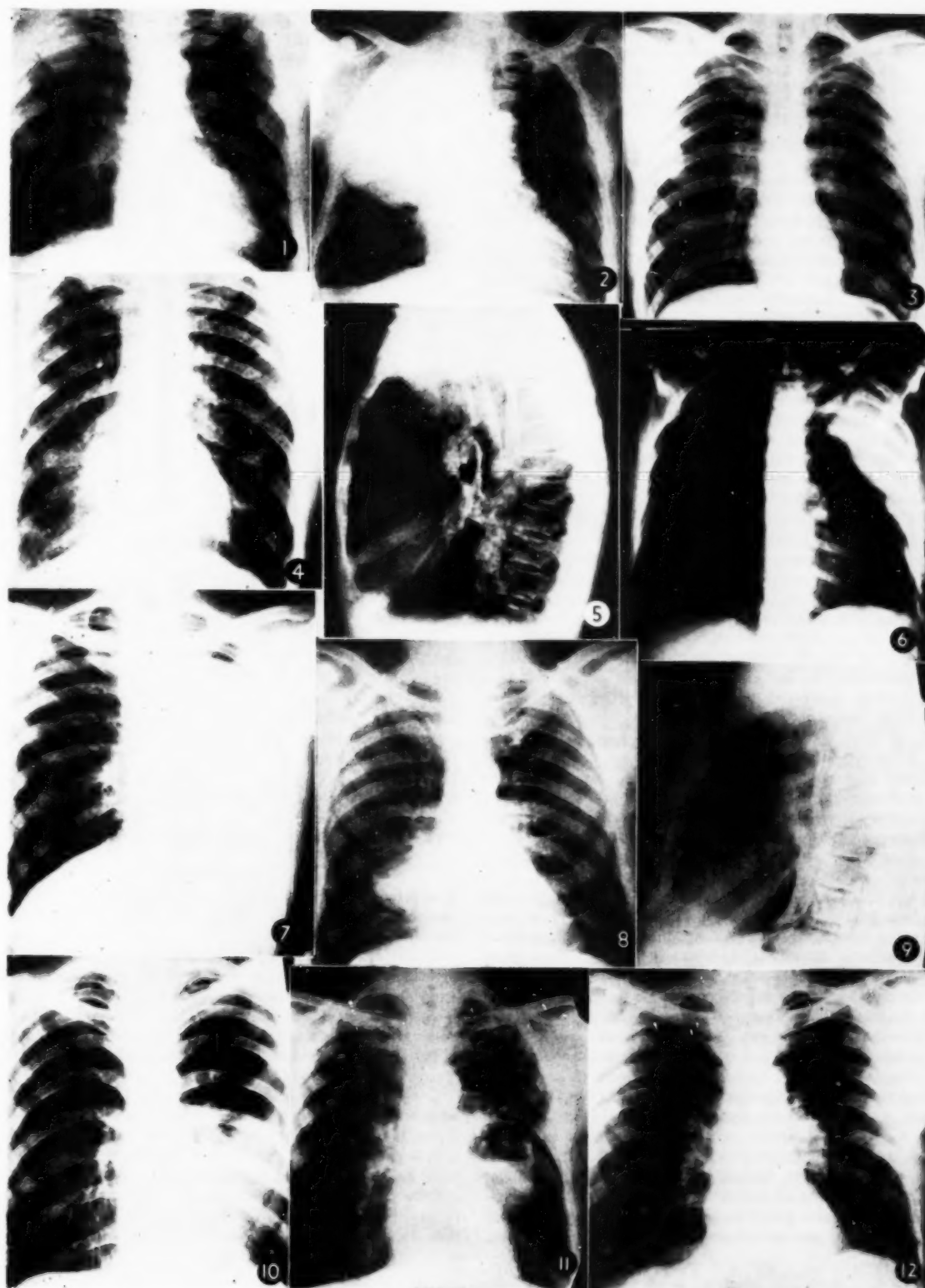
Fig. 8. X-ray of an atelectatic right middle lobe due to carcinoma in a diabetic male of 67 who had intermittent haemoptyses for previous 18 months.

Fig. 9. Left lateral X-ray of a male aged 70 who asked his doctor to X-ray him for haemoptysis. When this was reported upon as negative he insisted that he be seen by a physician, who because of lower lobe collapse seen in this X-ray referred him for surgery. Alive 30 months after left pneumonectomy.

Fig. 10. X-ray of a male who was perfectly well till he developed 'flu', which persisted for two months. X-ray (confirmed on lateral film) showed an atelectasis of the lingula due to carcinoma.

Fig. 11. X-ray of a male aged 63, showing a lung abscess due to carcinoma.

Fig. 12. X-ray of an elderly male who had repeated haemoptyses. This X-ray showing highly suggestive unilateral hilar enlargement was diagnosed by a panel of doctors as being an enlarged pulmonary artery with emphysema. Several weeks later complete collapse of the left lung occurred and bronchoscopy confirmed a growth.



Deaths from bronchogenic carcinoma per annum—England and Wales:

1900 ..	254	1935 ..	3,195
1910 ..	349	1940 ..	4,988
1920 ..	500	1945 ..	7,462
1930 ..	1,489	1947 ..	9,287

Whether this increase is real or only apparent is, we feel, difficult to decide for the following reasons:

(1) The average age of the population tends to be higher and therefore more people fall into the carcinoma age.

(2) The disease is much more readily diagnosed because of the widespread establishment of thoracic units, which by modern diagnostic measures eliminate clinical and pathological misdiagnosis.

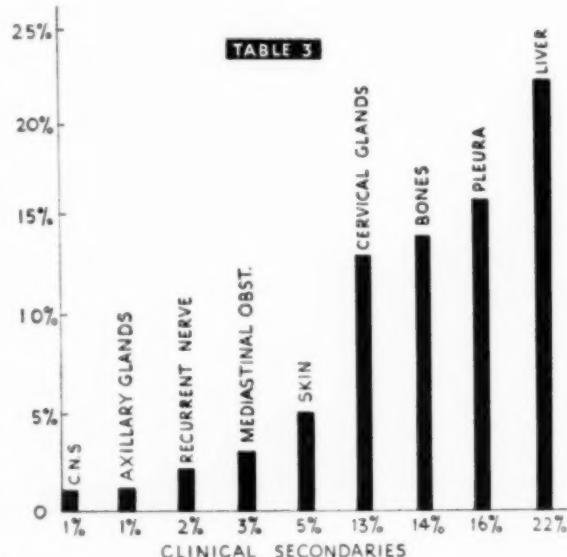
(3) As Reinhoff⁶ points out, 'the diagnosis of pulmonary malignancy until the advent of surgery was infrequently made as medicinal and radiation therapy were equally ineffective and the disease when so treated was and is always fatal'.

Macklin,¹⁷ dealing with pitfalls in carcinoma statistics, points out that 'straightforward' cases rarely come to autopsy for confirmation, whereas 'obscure' cases, of which there are many, are more commonly examined post mortem and thus previously undiagnosed lung carcinoma is discovered. He points out that to base the estimation of the increase of lung cancer cases on cancer necropsy cases is a fallacy; for instance, proven breast cancers do not necessarily come to autopsy, but a case with vague symptoms and undifferentiated lymph-node involvement is likely to do so and the underlying bronchogenic carcinoma will thus be found. Ariel,¹⁸ analysing 15 years' consecutive admissions to an American hospital points out that lung cancer expressed as a percentage of all primary malignant neoplasms has progressively increased from 2.1% in 1931 to 11.7% in 1946, while gastric carcinoma has remained stationary. Whatever the cause of this apparent increase in bronchogenic carcinoma, it behoves the profession to be constantly on the look-out for it. In this country there are probably 400 new cases amongst the European population per annum (c.f. Fulton¹⁵).

PATHOLOGY

Willis²⁰ states that although 3 or more histological types are described, 'it must be emphasized that there is only one entity, carcinoma of the lung, that individual tumours show various structural combinations, and that great pleomorphism is possible in one tumour'. He says that undifferentiated anaplastic carcinoma is the most common type and oat cells are found in both squamous and glandular growths. In their size, rate of growth, local spread and production of metastases, pulmonary carcinomas show the utmost diversity. Some tumours attain huge dimensions without producing remote metastases (Fig. 2), others remain small, sometimes almost microscopic, yet produce large metastases (Fig. 3); some grow with unexampled rapidity, others remain relatively small after several years' duration; some form well-defined masses (Fig. 1), others a diffuse thickening of the bronchial walls, and yet others ill-defined extensive peri-bronchial infiltration (Figs. 4 and 5). Metastases commonly occur in the lymph glands,

serous membranes (pleura, pericardium and peritoneum), liver, adrenals, central nervous system and skeleton (Table 3). Rarely metastases occur in the eyes, skin, intestines,



hydrocele sac, oral mucous membrane, myocardium, thyroid, pancreas, ovaries, spleen, gall bladder, prostate and testes.

Ochsner²¹ reports that amongst 548 bronchogenic carcinomas there were histologically 3 types, viz.: (1) epidermoid, most commonly seen in the lobar bronchi and occurring chiefly in the older age group, (2) adenocarcinoma, occurring usually peripherally and in the younger age group, and (3) undifferentiated (with small round cells, large clear round cells or irregular cells) occurring at both sites but slightly more common peripherally. He states that epidermoid carcinoma is 2½ times more common in men than in women whereas adenocarcinoma is 2½ times more common amongst women.

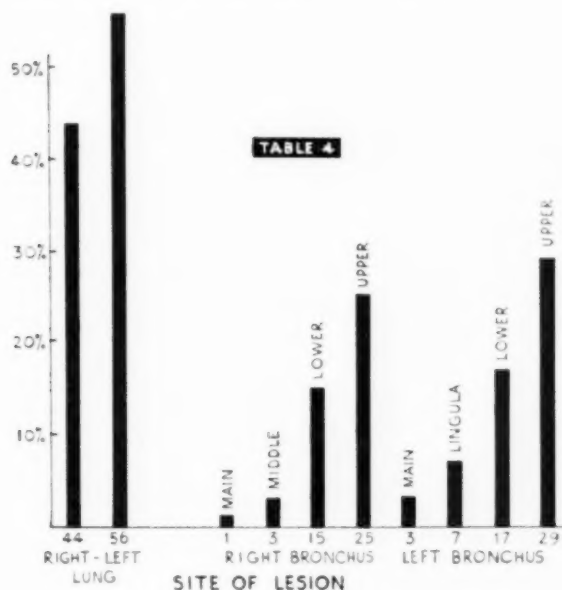
Gross Pathology

The growth can affect the stem bronchi, lobar bronchi or peripheral bronchioles (Table 4). There are several varieties:

1. *Peripheral*. This type originates in one of the smaller bronchioles, can rarely be visualized by the bronchoscope, and is commonly adeno-carcinoma or undifferentiated. Because of their proximity to the pleura, blood-stained effusions and extension to the chest wall are common. Hilar gland involvement tends to be confluent, and blood-spread secondaries are usual.

2. *Central Hilar Type*. In this the growth is usually squamous, occurring in the main bronchi and visible through the bronchoscope. It initially appears as a firm grey-white papillary growth and surrounds and ulcerates through the bronchus. The growth whilst still small is sessile, but ulcerates the mucous membrane, which is replaced by sub-mucous infiltration and nodules so that the walls themselves are thickened by infiltration with

carcinoma and the bronchi narrowed. Metastases are small and discrete, initially limited to the regional lymph nodes. Bronchial obstruction is common in this type and causes early cough, haemoptysis and sputum.



3. *Central Mediastinal Type.* Here the tumour is largely of an infiltrative type, surrounding and compressing the bronchi from without and infiltrating the mediastinum. It simulates a mediastinal tumour, with superior mediastinal obstruction and nerve involvement, long before bronchial symptoms are present.

4. *Pancoast's Tumour.* Any lesion at the thoracic inlet will cause this syndrome, though most cases are due to peripheral bronchogenic carcinoma in which there is a Horner's syndrome, pain in the shoulder, ulnar nerve paresis and X-ray evidence according to Oosthuizen²² of an apical opacity with bone destruction (Fig. 6).

Pathological Complications

Pathological complications depend on:

Extension of the growth by:

(a) *Continuity*, central and peripheral through the lung substance and in the submucous layer of the bronchus, causing a lung tumour and narrowing of the bronchus.

(b) *Contiguity:*

- As the tumour increases in size, it ulcerates through the mucous membrane and discharge appears as sputum or bleeding.
- If the obstruction to the lumen is incomplete, infection occurs distally and purulent sputum is produced.
- If complete obstruction occurs, there is atelectasis with dyspnoea and pain (Fig. 7).
- The obstruction may be intermittent, especially with chemotherapy.
- Sometimes incomplete obstruction produces obstructive emphysema.
- Extension to the pleura produces pain and effusion with dyspnoea. The effusion may be bloodstained, purulent or clear.

vii. Extension to the other bronchus will produce profound dyspnoea.

viii. Pericardial involvement with pericarditis, effusion and obstruction of the pulmonary veins.

ix. Phrenic-nerve irritation with hiccough and subsequent diaphragmatic paralysis.

x. Recurrent-nerve involvement with hoarseness and brassy cough.

xi. Infiltration of the chest wall and implication of the intercostal nerves with the production of an extrathoracic mass.

xii. Mediastinal involvement with superior vena-caval obstruction.

xiii. Involvement of oesophagus, rare by direct invasion, usually by glands.

xiv. Infiltration and compression of thoracic duct with production of a chylo-thorax.

(c) *Lymphatic Permeation.* Spread is first to the broncho-pulmonary and hilar lymph glands, and thence to the interbronchial lymph glands, causing broadening of the carina. From here via the broncho-mediastinal lymph trunk and paratracheal lymph glands to the posterior-inferior deep cervical lymph glands. Thirteen of our cases have shown this. Occasionally the axillary glands are involved and rarely the groin.

(d) *Haematogenous Spread.* This is extremely common (see Table 3).

i. To the brain, where the metastases are often single, but multiple when meningeal. Increased intracranial pressure in middle age should suggest a primary bronchogenic origin.

ii. Skeleton, especially the ribs, long bones, pelvis and vertebrae. Fourteen per cent of our series have shown bone involvement.

iii. Skin, where secondaries appear as hard nodules, especially on the trunk and scalp. Five of our cases had skin secondaries. In one woman a skin secondary was the first manifestation of her underlying disease.

iv. Spread to the liver, the adrenals and less frequently in the other organs (22% of our series showed spread to the liver).

(e) *Secondary Infection.* This varies from so-called pneumonia to lung abscess and empyema. This aspect of carcinoma of the bronchi has been largely obscured by the ubiquitous use of antibiotics and chemotherapy.

DIAGNOSIS

As Brock²³ writes, 'The important factor in making a diagnosis of the disease, is to think of the possibility of its existence. Any departures from normality in the functions of a viscus in a patient of a carcinoma age should make one consider the possibility of malignant disease'. Ochsner²¹ states, 'The diagnosis must be suspected in every man over 40 who has an unexplained thoracic discomfort, persistent cough, haemoptysis or any other symptoms or signs referable to the respiratory system'. Reinhold⁶ states, 'There are no characteristic or pathognomonic signs and symptoms of primary carcinoma of the lung. The lesion masquerades as many of the commoner disorders of the lung and although often insidious, the recurrent nature of signs and chest symptoms in a patient previously well, or the development of a new cough or alteration in a pre-existent one, should necessitate full investigations to exclude carcinoma'. Johnson²⁴ states, 'The early diagnosis of bronchogenic carcinoma depends largely upon the physician having a large index of suspicion'. Humphries²⁵ states, 'Because until recently primary carcinoma has been thought to be a rare disease, the possibility

of its presence is all too often overlooked by the general practitioner. He fails to realize the underlying pathology until after a protracted period of waiting for improvement he is forced to realize that he is dealing with something more than an inflammatory process. One of the gravest errors is to think the patient should look as though he has a carcinoma, or to be misled when the X-rays are consistent with a growth but the patient does not look as though he harbours one. That there is delay in diagnosis is all too evident from our series (Table 5)

TABLE 5: FACTORS DELAYING DIAGNOSIS

No delay due to patient	65 cases
Average delay of 5 months due to patient	35 ..
No delay on part of doctor	16 ..
Average delay of 6 months due to doctor	83 ..
Delay of 15 years in a dermoid with malignant change	1 case

and from the literature. Overholt²⁶ reports that in his series the average patient waits 3 months after symptoms

begin before he consults his doctor, who spends another 7 months differentiating the condition before referring him to a chest surgeon. Leddy²⁷ states that the average duration of symptoms before diagnosis in 448 cases was 8½ months. Humphries²⁸ found the average duration of symptoms before admission to hospital in 125 cases was 5 months. Mason²⁸ states that even the mass X-ray centres sometimes hang on to suspicious cases for observation instead of sending them for investigation. Mass radiography will bring to light some 20 carcinomas in every 100,000 above the age of 40. Prompt and adequate investigation of these is of paramount importance. A dramatic response on the X-ray shadow in the lung following chemotherapy is reported upon by the radiologist as being evidence against an underlying tumour. It should be remembered, however, that the suppuration distal to bronchial obstruction will certainly improve whilst the underlying tumour remains.

(To be concluded)

ABSTRACTS

Palumbo, L. T., Quirin, L. F. and Conkling, R. W. (1953): *Lumbar Sympathectomy in the Treatment of Peripheral Vascular Diseases*, Surg. Gynec. Obst., **96**, 162.

This report evaluates the results of 221 lumbar sympathectomies (some or all at the Veterans Administration Hospital, Des Moines, Iowa) in 159 male patients with a variety of disorders which involved the vessels of the lower extremities.

Lumbar sympathectomies, either single or bilateral (at the same time), were usually performed under spinal anesthesia, by the use of a transverse abdominal incision on either or both sides at the level of the umbilicus. The approach was extraperitoneal through a muscle-splitting incision. The sympathetic ganglionated chain was usually removed from below the first lumbar ganglion to below the fourth.

There were 49 patients with arteriosclerosis (including 20 diabetics); 10 with arterial emboli, aneurysm, or thrombosis; 31 with thromboangiitis obliterans (Buerger's disease); 21 who had sustained vascular damage from freezing, immersion or causalgia; 23 with chronic thrombophlebitis; 11 with varicose or chronic leg ulcers; and 14 with unclassified peripheral vascular disease.

All age groups from 20 to 84 years were represented, the incidence of vascular disease being highest in those between 51 and 60 years of age.

The over-all results of lumbar sympathectomy seem to be encouraging in patients with peripheral vascular diseases. Generally the patients experienced relief from pain or a diminution of pain, a dry and warmer extremity, reduction of oedema, clearing of the cellulitis, arrest of the advancement of gangrene, and more rapid healing of the ulcer. In those who required amputation, it could usually be performed at a lower level. The stumps healed readily and the patients were more quickly rehabilitated.

In the entire series, the results were considered good-to-excellent in 65% of the cases, and fair in 28%. In the remaining 7% per cent, the results were poor. The most favourable results occurred mostly in the patients with Buerger's disease, varicose or chronic leg ulcers, and freezing and immersion foot. In view of the more advanced age of the patients with arteriosclerotic disease of the peripheral vessels, the fact that there were favourable results in 60% of them is considered good. These patients experienced considerable relief; and in many of them the operation temporarily obviated a major amputation.

The patients with chronic thrombophlebitis of long standing, with the associated oedema, chronic cellulitis, ulcer, and pain,

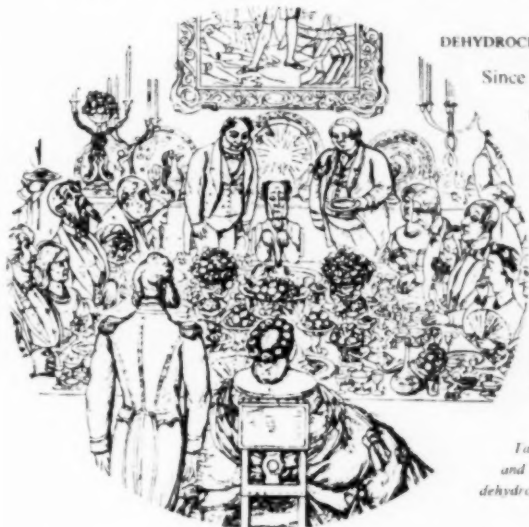
improved less than any of the other groups, the over-all improvement being less than 40 per cent. However, any procedure or treatment which can bring relief or improvement is considered to be worth while, since the risk involved with this type of surgery is minimal. It is the opinion of one of the authors that greater improvement can be realized in these patients if lumbar sympathectomy is combined with ligation of a large venous channel above the site of thrombotic involvement.

The rate of complications for the 221 operations was 9.5%. This is low, if it is considered that the group included a fairly large percentage of patients who were more than 60 years of age.

Desmeules, R. et al. (1953): *Considerations on Isoniazid in the Treatment of 72 Cases of Pulmonary Tuberculosis*, Laval Méd., **18**, 445.

Isoniazid, in doses of 4 mg. per kilogram of body weight, is well tolerated by the human organism, and results in a significant improvement in the patient's general condition. Improved vitality and a feeling of well-being are seen in the great majority of cases. The physical and functional aspects of caseous or fibrous pulmonary tuberculosis may be notably altered with this drug although bacteriologic and radiologic changes may not run parallel with them. Against tuberculosis, the drug seems bacteriostatic rather than bactericidal, but certain progressive conditions are definitely benefited. Some conditions formerly not amenable to therapy may be reversed or arrested and then treated with other surgical or medical procedures. Of the 72 patients in this series 22 (30.5%) were greatly improved, 29 (40.1%) were moderately improved, 16 (22.2%) were unaffected, and 5 (7%) worsened. The criteria for judgment were as follows: *Greatly Improved*—Favourable effect on signs and symptoms, evidenced clinically, radiologically, and on laboratory test (complete disappearance of Koch bacilli not required). *Moderately Improved*—Physical and functional improvement, with a probability of a cure with this or other therapy in the future. *Unaffected*—Insufficient change from the functional, bacteriologic and radiologic standpoints to establish a cause-and-effect relationship between condition on examination and the therapy given (patients so rated might however have a weight increase and some improvement in general condition). Improvement in temperature, appetite, weight, and cough were quite notable in the great majority of these patients.

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*Gruber, C. M., Ellis, F. W. and Freedman, G. J. Pharmacol. & Exper. Therap. 81:254 (July) 1944

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South African Medical Journal

Suid-Afrikaanse Tydskrif vir Geneeskunde

EDITORIAL

'NON-APPROVED' MEDICAL AID SOCIETIES

Members of the Association will be interested to read the comment contained in the Report of the General Committee of the United Banks' Medical Aid Society for the year ended 30 June 1953, under the heading 'Medical Fees'. This is as follows:

'It is this aspect of the Society's affairs which has perhaps loomed largest in your Committee's deliberations during the year, and it is greatly to be regretted that certain doctors have used the fact of our non-recognition by the Medical Association as a pretext for charging high fees. Actually, the Medical Association's own tariff for 'approved' Societies expressly permits a doctor to charge private fees at any time; this, with some doctors, has always been the case, and no agreement whatsoever has deterred them from so doing.

'But it is with pleasure that your Committee observes that a number of doctors throughout the Union co-operate with members (and the Society); some have asked us to furnish them with copies of our tariff and they have charged members accordingly. It is expected that with the revision of the tariff (in conjunction with other "non-approved" Societies) many other doctors will follow suit, and the assistance of members in bringing our tariff to the notice of their doctors would be appreciated.' (The italics are our own).

As this report is circulated to members of the United Banks' Medical Aid Society, it is regretted that it should contain such misleading statements. The agreement which the Association has with the Medical Aid Societies approved by it is that practitioners will normally charge medical fees according to the agreed tariff, which is lower than the fees customarily charged in private practice. It is clearly stated in the tariff that if medical practitioners do not wish to abide by the Tariff of Fees, the patient should be informed of this at the first visit and the Medical Aid Society will have no responsibility to the doctor for the payment of his fee, so that if the patient continues to employ the services of that doctor he must be directly responsible for payment.

When a few Societies, previously approved, elected to withdraw from the agreement with the Medical Association, our members were obviously no longer under any obligation to consider members of those Societies as 'Medical Aid' patients and they were subject to customary private fees. In the circumstances it was not necessary for doctors to complete the claim forms for members of such unapproved Societies and they were asked to furnish them only with the usual detailed account normally supplied to private patients.

So far as the second portion of the extract from the United Banks' Medical Aid Society's Report is concerned,

VAN DIE REDAKSIE

'NIE-GOEDGEKEURDE' MEDIESE HULPVERENIGINGS

Lede van die Vereniging sal seker geïnteresseerd wees in die kommentaar oor 'Mediese Fooie' in die verslag van die Algemene Komitee van die Mediese Hulpvereniging van die Verenigde Banke vir die jaar geëindig 30 Junie 1953. Dit lui soos volg:

'Dit is hierdie aspek van die Vereniging se aangeleenthede wat miskien die meeste in u Komitee se beraadslagings gedurende die jaar opgedoem het en dit is te betreur dat sekere dokters die feit dat ons nie deur die Mediese Vereniging erken word nie as 'n voorwendsel gebruik het om hoër fooie te vra. Eintlik laat die Mediese Vereniging se eie tarief vir „goedgekeurde” Verenigings 'n dokter uitdruklik toe om private fooie te enige tyd te vra. Dit was nog altyd met sekere dokters die geval en geen ooreenkoms van watter aard ook al het hulle nog hiervan teruggehou nie.

'Dit is egter met genoeë dat u Komitee oplet dat 'n aantal dokters dwarsdeur die Unie met lede saamwerk (asook die Vereniging); sommige het ons versoek om hulle van kopieë van ons Tarief te voorsien en hulle vra ons lede daarvolgens. Dit word verwag dat met die hersiening van die Tarief (in samewerking met ander „nie goedgekeurde” Verenigings) baie ander dokters hul voorbeeld sal volg, en dit sal waardeur word indien lede ons Tarief onder die aandag van dokters sal bring.' (Kursivering van ons).

Dit is jammer dat die verslag, wat onder die lede van die Verenigde Banke se Hulpvereniging versprei word, sulke misleidende bewerings bevat. Die ooreenkoms van die Mediese Vereniging met mediese hulpverenigings wat deur hom goedgekeur is, bepaal dat geneeshere in die reël rekenings sal lewer volgens die ooreengekome tarief, wat laer as die gebruikelike gelde vir private pasiënte is. Dit word in die tarieweboek duidelik gestel dat as geneeshere hulle nie by die tarief wil hou nie, hulle die pasiënt daarvan by die eerste besoek moet verwittig. Die hulpvereniging sal dan nie vir die dokter se rekening verantwoordelik gehou kan word nie, en gevolglik, as die pasiënt voortgaan om die dienste van daardie geneesheer te gebruik, sal hy self vir die rekening aanspreeklik wees.

Toe 'n klein aantal verenigings, wat vroer goedgekeur was, verkies het om hulle van die ooreenkoms met die Mediese Vereniging te onttrek, was ons lede klaarblyklik nie langer onder enige verpligting om lede van sodanige verenigings as 'Mediese Hulp'-pasiënte te beskou nie, en was hulle onderhewig aan die gebruikelike gelde vir private pasiënte. Onder die omstandighede was dit nie nodig dat geneeshere die eisvorms vir lede van hierdie nie-goedgekeurde verenigings voltooi nie, en was hulle gevra om sodanige pasiënte slegs van die gewone gespesifiseerde rekenings te voorsien soos normaalweg aan private pasiënte verskaf word.

Wat die tweede deel van die uittreksel uit die verslag betref is dit van belang om te weet dat vir jare, gereken

it is interesting to know that for years, dating probably from the time when the United Banks' Medical Aid Society was the only such Society, medical men have been in the habit of writing to the Society requesting copies of the Tariff of Fees. Until the Society withdrew from approval it was the custom for the Secretary to refer these letters to the Association's Head Office so that tariff books could be supplied. Since that time, however, no requests have been referred and apparently medical practitioners have been given copies of the tariff drawn up and purporting to be issued by the Southern Council of Medical Aid Societies. This is a yellow-covered book and should not be confused with the blue-covered tariff book, which is the only official tariff for approved Medical Aid Societies. It has the Association's name clearly printed on the cover and is dated 1 January 1952. Any tariff book other than that issued by the Association is an attempt to induce doctors to accept a scale of fees not approved by the Association and is definitely not issued with the concurrence of the Association.

Medical practitioners will realize that the Association is acting in their interests in giving a lead to its members in this matter of contract practice, and should not co-operate with any Society on a tariff of fees which differs from that drawn up by the Association, as for obvious reasons this will be on a lower scale than that agreed to by the Association.

The Medical Aid Societies approved by the Association are listed at the back of the booklet, and a list of additional Societies approved was recently issued for general information. The Societies not listed are those that have not been approved by the Medical Association of South Africa and the members of these non-approved Societies should be charged the customary fees for private practice and claim forms submitted by them should not be completed. While it is admitted that any medical practitioner has the right to scale his fees according to his patient's means, members of the Association should not make a practice of charging the patients of any non-approved society fees which are lower than the tariff rates applicable to approved Medical Aid Societies. To do so, and to complete the claim forms of non-approved societies, are actions disloyal to fellow members of the Association.

van die tyd af toe die Mediese Hulpvereniging van die Verenigde Banke waarskynlik die enigste van sy soort was, geneeshere die gewoonte gehad het om aan hierdie vereniging te skrywe vir eksemplare van die tarieweboek. Totdat dié vereniging hom van goedkeuring onttrek het, was dit gebruiklik vir sy Sekretaris om sulke briewe na die Mediese Vereniging se hoofkantoor te verwys, sodat tarieweboeke aan die aansoekers gestuur kon word. Sedert daardie tyd, egter, word sulke navrae nie meer na die Mediese Vereniging verwys nie, en heel waarskynlik word geneeshere nou van 'n tarief voorsien wat deur die *Southern Council of Medical Aid Societies* uitgegee word. Dit is 'n boekie met 'n geel omslag, en moet nie verwar word met die tarieweboek van die Mediese Vereniging nie, wat 'n blou omslag het met die naam van die Mediese Vereniging duidelik op die buiteblad gedruk. Laasgenoemde is gedateer 1 Januarie 1952, en is die enigste offisiële tarief vir goedgekeurde mediese hulpverenigings. Enige tarieweboek behalwe dié van die Mediese Vereniging is 'n poging om dokters te beweeg om 'n tarief te aanvaar wat nie deur die Mediese Vereniging goedgekeur is nie en bepaald sonder die medewerking van die Vereniging uitgegee is.

Geneeshere moet beseft dat die Vereniging in hulle belang optree wanneer daar leiding gegee word i.v.m. kontrak-praktyk. Dit word ook van hulle verwag dat hulle nie met enige vereniging sal saamwerk op grondslag van 'n tarief wat van die Mediese Vereniging se tarief verskil nie, want vir klaarblyklike redes is sodanige tarief op 'n laer skaal dan dié wat deur die Mediese Vereniging aanvaar is.

Agter in die tarieweboek is 'n lys van die goedgekeurde hulpverenigings, en 'n aanvullende lys was onlangs vir algemene inligting uitgegee. Verenigings waarvan die name nie daarin voorkom nie, is nie deur die Mediese Vereniging goedgekeur nie, en geneeshere behoort lede van hierdie nie-goedgekeurde verenigings die gebruikelike gelde vir private pasiënte te vra, en hulle eisvorms nie te voltooi nie. Alhoewel dit erken word dat enige geneesheer die reg het om sy gelde volgens die pasiënt se vermoë te bepaal, behoort lede van die Vereniging nie 'n gebruik daarvan te maak nie om lede van enige nie-goedgekeurde hulpvereniging te behandel teen gelde wat laer is as die tarief vir goedgekeurde hulpverenigings. Om dit te doen, en om hul eisvorms in te vul, is 'n handelwyse wat nie strook met loyaliteit teenoor medelede van die Vereniging nie.

THE PROBLEM OF LOWER ABDOMINAL PAIN IN WOMEN*

C. F. KRIGE, M.A., M.B., B.Ch. (OXF.), F.R.C.S. (EDIN.)

Johannesburg

The female symptom-complex of low abdominal pain with or without backache is responsible for a great deal of physical disability and mental distress in modern life. Its treatment so far has been difficult and disappointing

because of the tendency to treat the genitalia and not the patient as a whole. Patients frequently consult the gynaecologist because their sufferings are primarily associated with the vital functions—menstruation, coitus and childbearing. In about 75% of such cases no definite gynaecological lesion can be found to explain the symptoms. Too often associated findings are treated as

* A paper read at the South African Medical Congress, Johannesburg, September 1952.

causal lesions and ill-advised laparotomies have perpetuated the error. It is essential, therefore, for the gynaecologist and more especially the operating general practitioner to be acquainted with the many extragenital causes of pelvic pain.

Various terms have been applied to this syndrome but none is fully satisfactory. Thus Theobald¹ calls it the *pelvic sympathetic syndrome* and claims successes with his somatic treatment. Others prefer *pelvic neurosis*, *plexalgie hypogastrique* (Cotte²), *pelipathia vegetativa*, *endosymphathosis genitalis*, *spastische parametropathia*, or *plethora abdominis*, and claim as aetiological factors such assumed pathological processes as congestion fibrosis (Taylor³) or chronic parametritis.

The perception of pain is a physiological function intimately connected with its psychological counterpart—emotion. The more easily the latter is evoked the lower the patient's resistance to pain becomes and soon she is seldom free from it. A simple causal lesion may become obscured and complicated by psychological factors, making correct diagnosis and successful treatment extremely difficult. Increasing ill-health and unhappiness bring about changes in environment. Sex relations deteriorate owing to pain or the fear of further pregnancies. The economic struggle to maintain social status increases physical and mental stress and strain. The patient is now ready to be labelled psychoneurotic if she fails to adjust herself to her changing world.

To sort out the different factors that may have caused or added to her ailments one needs the assistance of other specialists—particularly the orthopaedists, neuropsychiatrists, urologists and radiologists.

The various extra-genital factors that may give rise to this symptom-complex either singly or collectively are the following:

1. Orthopaedic Factors

- a. Increasing weight, with flat feet
- b. Faulty posture, with abdominal muscles weakened by pregnancies producing lordosis
- c. Sudden or prolonged strain of abdominal or back muscles
- d. Hip-joint troubles or sacro-iliac strain
- e. Derangements of spinal column, slipped discs or nerve-trunk irritation

2. Intestinal Factors

- a. Constipation, wind, appendicitis, diverticulitis
- b. Tender irritable colon, mucous colitis
- c. Visceroptosis, adhesions

3. Urological Factors

- a. Cystic ureters
- b. Ureteritis
- c. Cystitis
- d. Trigonitis
- e. Bilharzia

4. Nervous Factors and Psychosomatic states

- a. Frustration, frigidity, masturbation, sterility, fear of pregnancy and coitus
- b. Tension states with mental and physical tiredness, anxieties, nervousness and phobias
- c. Difficulties with husbands, jealousy, suspicions, 'spoilt women', etc.

Bearing these factors in mind it is obvious that no gynaecological examination is intelligent that does not study the patient as a whole. It is necessary to take

into consideration the general physical condition and conformation of the patient, who may appear surprisingly healthy in spite of a formidable list of complaints. She may on the other hand appear to be a constitutionally inadequate person obviously maladjusted to environment. There are the thin tense nervous types of the tired visceroptotic, unhappy types or the fat overweight, large hairy types suggesting endocrinopathy. Their symptoms must be correlated to their general appearance and conformation rather than to accidental pelvic findings.

In taking the history one must study the patient's mental attitude and general behaviour during the interview and try to assess the reliability and honesty of her replies. One should enquire about occupation, environment, domestic happiness and sex habits. Both good and bad husbands may be aetiological factors. Emotional stability can usually be assessed during the physical examination, which may be very difficult owing to nervous tension and spasm of levatores ani. By firmness and by distracting the patient's attention it is frequently possible to palpate thoroughly both uterus and adnexa which were previously too tender to touch. One must be careful in these cases not to make a diagnosis of chronic salpingitis and operate without objective findings.

In my practice I have found definite gynaecological lesions in only 25% of all patients complaining of low abdominal pain. Cases presenting pelvic pains of extragenital origin comprise 36% of my total private practice and about 42% of benefit society work. One-third of these cases have had one or more laparotomies! For the purpose of discussion I have classified my cases into three more or less equal groups: (1) cases doubtfully gynaecological; (2) cases previously operated on; (3) cases not gynaecological.

This is an arbitrary division, based neither on causal factors nor on symptoms, but I find it useful for discussion. In spite of previous operations and of different pelvic findings the symptoms in these cases are essentially the same, namely low abdominal pain worse in one iliac fossa, spreading down the legs or more often round to the back. Symptomatology will vary in detail according to aetiology. Thus dyspareunia is the complaint of the sexually maladjusted. Menorrhagia, leukorrhoea and stress incontinence are gynaecological symptoms of the constitutionally inadequate type or of the physically and mentally tired person; and headaches too. Backache is the result of postural sins and muscle strain. Pressure pains and rectal pains are frequent in visceroptotics.

Group I includes cases where pains are associated with mobile retroversions, tender or cystic ovaries, cervicitis or early prolapse. As all the symptoms in these cases may be due to extragenital factors previously mentioned it is dangerous to decide on operation for these conditions before adequate investigation of the patient as a whole. Laparotomy may mean the perpetuation or aggravation of the complaints.

Heidler⁴ maintains that mobile retroversion is not a disease and that the asthenic woman who has it should receive general treatment; not the prolapsed uterus but the prolapsed person should be put straight. He reports

that the incidence of suspension operations at the Woman's Clinic II in Vienna has dropped to 0.02% or only 8 in nearly 4,000 cases of retroverted uteri! Treatment by ring pessaries is harmless and may have psychological value. Theobald maintains that pain does not commonly occur in the ovary, because ovaries sensitive on bimanual palpation are insensitive if squeezed during operations under local anaesthesia. Cervicitis can be adequately cauterized in consulting rooms. This is a useful procedure and is frequently curative in early cases. Ross⁴ maintains that low abdominal pain in either iliac fossa is more frequently due to cervicitis than to ovarian lesions. Early prolapse can be improved by remedial exercises. Patients in this group are in constant danger of moving into *Group II*, which includes only cases where operations have been performed without relief of the painful symptoms. The condition has remained unchanged or even aggravated because the causal lesion has not been treated. These patients may have had appendectomies, suspensions with or without sterilization, partial ovariectomies, and repeat operations for adhesions. Most of them have had their ureters stretched. About 25% of these cases have had the 4 in 1 wonder operation of the Reef, viz. an appendectomy, suspension, sterilization and ovariectomy all through one cut, when they should have been treated by a psychiatrist or orthopaedist. Now the heavy suspended sterilized uterus with menorrhagia and aggravated pain is an indication for radical surgery.

Johnson⁵ in an illuminating and courageous article, 'Is selective lower-quadrant surgery in woman curative?' analyses 200 such cases where laparotomies were performed primarily for appendicitis. Reports on tissue removed from the ovaries suggested disrupted physiology rather than pathology. He concludes that about two-thirds of these patients could have been helped by common-sense advice and by teaching the patient to live with herself. The other third could have been helped by psychiatrists. In spite of repeated operations symptoms recurred with fixation of a psychosomatic state.

Group III includes cases with normal genitalia. Tenderness is found over the lower abdomen and marked hypersensitivity on vaginal examination. This group may include cases of appendicitis, constipation, mucous colitis, ureteritis and bilharzia. Orthopaedic and psychosomatic factors may also be found. These patients are also in danger of being operated on mistakenly. Many of them suffer from a 'tension state' often characterized by a sensitive colon and extremely tender genitalia. This tenderness has been mistakenly labelled inflammation and the patient has several courses of injections with our new wonder drugs and also diathermy without benefit. In desperation the practitioner may allow his sympathy to override his judgment by operating on the patient and increasing her troubles. The following case will illustrate most of the points I have raised so far in this problem of low abdominal pain. Briefly:

Miss M., aet. 27, seen by me in June 1942. Complaint: Pain in right iliac fossa and severe dysmenorrhoea. Never well since appendectomy in 1940. She had had many worries in 1941 having lost her mother and sister. She looked pale and miserable and in fair state of nutrition. On examination she remarked that the pain in the R.I.F. was 'sort of in the bone'. P.V.: The vagina and cervix were normal; the uterus

was small, retroverted and to the right with the ovary attached to it; movement caused acute pain. On the diagnosis of fixed retroversion and adhesions I did a suspension and removed a cyst from the right ovary in July 1942. She did not get well at all. In December 1942 she looked ill and was tense and nervous. She still had pains but more in L.I.F. and pain with her periods. She was worried with wind and nausea. She carried on miserably until July 1943 when she was referred to medical out-patients at Johannesburg General Hospital. In February 1944 she had a laminectomy done for a slipped disc and improved immediately. She got married soon afterwards and had a baby in England in 1945. In spite of subsequent injury to her back requiring manipulations and plaster jackets up to 1950, she has remained well and is now a bright and cheerful person. In my own mind I think that marriage and motherhood have added to her continued improvement. My mistake was that I was satisfied I had treated causal lesions and blamed her general nervous state for her continued ill health. It was the co-operation of radiologists, psychiatrists, neurosurgeons and orthopaedists that came to the rescue and saved her from herself; or was it the husband?

In the above case one sees how misleading symptoms may be and with what difficulty the diagnosis that led to cure was arrived at. Even so, one is entitled to doubt whether the specific treatment would have succeeded without the invigorating effect of the patient's basic natural urges. The importance of correct diagnosis cannot be overestimated in abdominal pelvic pain, where surgical treatment so frequently leads to disaster. One can lose nothing by conservatism, which may not be so remunerative but yields dividends in end-results. Time has saved and cured many a patient. Any medical treatment has psychological elements, the value of which one can never properly assess. The confidence of the patient in her doctor and his assurances, and her optimism with regard to his suggested treatment, is her contribution to its success. This conception helps to explain the failure of the many different treatments for which successes are claimed, in unbelievers' hands. In my opinion most cases with abdomino-pelvic pain show signs of the tension state and need some form of psychiatric guidance. It is difficult to see how Theobald can get nearly 100% permanent cures in his hospital practice by cauterizing cervix and uterus with a silver stick, alone or in conjunction with the free use of procaine to anaesthetize the somatic sensory nerves, but not the sympathetic nerves. Ellers⁶ reports successes too, but in special cases, where the pain is due to somatic and not visceral causes, by paravertebral block with procaine and Dolamin. He admits, however, that two of his failures were benefited by chiropractors! De Villiers⁷ finds that partial oophorectomies may be curative in picked cases. Cotte⁸ advocates presacral neurectomies, but this operation can do good in cases of visceral origin only. Kraul⁹ divides the infundibulo-pelvic ligaments. Johnson takes the other view that psychiatric treatment may be needed for about one-third of his cases while the rest can be helped by conservative measures and common-sense advice and reassurance about the innocent origin of their symptoms and the absence of need for operation. I find myself heartily agreeing with him.

There is no end to this problem; it is a never-ending study. This abdomino-pelvic syndrome has 3 elements, the psychological, the somatic and the visceral in order of importance. That is how I see it, but many will dis-

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agree. In this disagreement lies the source of the many different lines of treatment, and also the cause of many failures. Each doctor sees and treats this condition in his own way. If he can cultivate clinical honesty and gauge the success of his treatment by end-results he will make fewer mistakes and grow in professional stature. In conclusion I want to emphasize that surgery is justifiable only if it removes the cause of the complaints, and if diagnosis is in doubt, watchful waiting is the best plan. *Time will tell.*

THE UROLOGICAL ASPECT OF LOWER ABDOMINAL PAIN*

H. CURRIE BRAYSHAW, M.B., Ch.B., M.R.C.S., L.R.C.P., F.R.C.S., F.R.C.S. Ed.

Johannesburg

Before proceeding to discuss the symptomatology and diagnosis of abdominal pain due to lesions of the urinary tract, a brief review of the anatomy and physiology of the ureter is necessary.

Anatomy and Physiology. The ureter is a relatively thick-walled muscular tube which conducts the urine from the renal pelvis to the bladder. It runs downwards, crossing the psoas muscle, passes behind the ovarian (or spermatic) vessels, curves over the common iliac vessels to enter the bony pelvis and, at the level of the ischial spine, curves medially in front of all the vessels except the uterine and vesical vessels close to the cervix and lateral fornix of the vagina (or beneath the vas deferens) to enter the bladder.

The ureter presents 4 points of physiological narrowing:

1. The pelvi-ureteral junction.
2. Where it crosses the iliac vessels.
3. Where it crosses the vas deferens or uterine vessels.
4. As it traverses the bladder wall.

The ureter consists of 3 coats—adventitia, muscular and mucous. The muscular coat consists of 3 layers of unstriated muscle—outer and inner longitudinal and middle circular. The outer 2 muscular layers become continuous with the muscular coats of the bladder, while the inner longitudinal fibres pass on to form the inter-ureteric ridge; other fibres pass over the trigone through the internal sphincter to gain attachment to the floor of the urethra. These fibres, known as Bell's muscle, play an important part in the act of micturition.

Vascular Supply. The blood supply is abundant—branches from the renal artery above the vessel, below from the ovarian or spermatic vessels and small branches direct from the aorta. The vessels perforate the coats to form a rich plexus in the submucous layer; thus the ureter can be freed throughout its whole length without interfering with its blood supply.

Lymphatic Drainage. This to a large extent follows the blood supply and there is a rich anastomosis with the lymphatics of the cervix or seminal vesicle, etc.

Nerve Supply. The innervation of the ureter is entirely autonomic and arises from 3 sources; the upper third from the renal plexus, the middle third from the superior hypogastric plexus (T 11 and 12, L 1), the lower third from the inferior hypogastric plexus (S 2, 3 & 4). The ureter may be stripped of all its connexions throughout its length without interfering with its nutrition and function. Clinically, however, it has been found that persistent pain is relieved by freeing the ureter throughout its length. It must be borne in mind that the urine is propelled along the ureter by peristaltic waves of contraction.

SYMPTOMATOLOGY

The pioneer work on ureteral lesions was carried out by Dr. Guy Hunner, of Baltimore, who unfortunately applied

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the term 'ureteric stricture' and, in most cases, no true stricture can be demonstrated. To-day the term ureteritis or ureteral spasm is used; Keyser has drawn the analogy with cardio-spasm or pyloro-spasm. The irritability and spasm of the ureter may be referred to its entire length, or may be localized to certain sections, and the symptoms may vary accordingly. Dr. Duncan Morrison introduced a useful classification based on the physiological narrowings (Fig. 1):

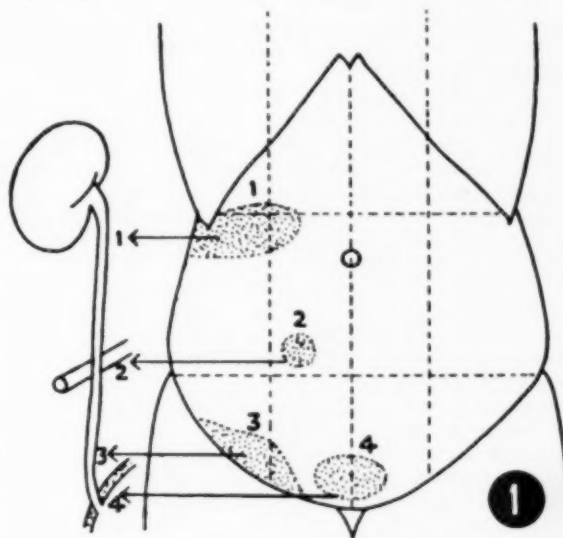


Fig. 1. Diagram showing sites of ureteral narrowing, and the areas of abdominal pain arising from these ureteral zones: 1. pelvi-ureteral, 2. common iliac, 3. broad ligament, 4. transurethral. (After Duncan Morrison.)

Zone 1: Pelvi-ureteral junction—pain in the hypogastrium, passing through to the loin.

Zone 2: Where the ureter crosses the iliac vessels—and here the pain is situated below and lateral to the umbilicus.

Zone 3: Where the ureter is in relation to the structures in the broad ligament or vas deferens—and the pain is referred to the inguinal region.

Zone 4: Where the ureter passes through the bladder wall—and the pain is then suprapubic.

* A paper read at the South African Medical Congress, Johannesburg, September, 1952.

It may thus be seen that the symptoms vary according to the zone involved.

Zone 1. Here the symptoms suggest a renal origin; the pain is worse when the patient is standing and is relieved by lying down, suggesting that it is due to a drag on the pelvi-ureteral junction.

Zone 2. The pain is situated in the iliac fossa and may be mistaken for an appendix. The pain is always worst when the patient is lying on the back; it is aggravated by turning over in bed and is usually relieved by getting up and walking about. Stretching upwards or lifting a weight may bring on the pain, similarly sitting in a cramped position in a low chair. Any form of exercise which involves stretching the ureter may bring on spasm, e.g. tennis, etc.

Zone 3. The pain is situated in the inguinal region just above Poupart's ligament and usually radiates into the thigh, causing a bruised, lame sensation.

In these 3 varieties there are, as a rule, no urinary symptoms whatsoever.

Zone 4. The intramural portion of the ureter is frequently involved in old-standing infective lesions of the bladder. The pain is typically suprapubic, and there are the associated urinary symptoms of frequency, dysuria, etc. Spasm of the musculature, including Bell's muscle, may lead to incontinence of urine, and this is one of the commonest causes of nocturnal enuresis in children.

Apart from the symptoms described above, there are certain characteristic symptoms common to all zones and which are difficult to explain and cause many mistakes in diagnosis:

1. *Lassitude.* All patients suffering from ureteritis complain of being deadly tired and unable to concentrate.

2. *Depression and Irritability.* This is a very common symptom. These patients break down and weep for no reason. The depression may be so marked that it overshadows the other symptoms, and I know of several patients who have been admitted to a mental home for treatment for the depression.

3. *Abdominal Distension.* There is another characteristic symptom; it usually occurs in the late afternoon and bears no relationship to the taking of food or constipation. This symptom often leads to an erroneous diagnosis of cholecystitis or colitis.

4. *Dysmenorrhoea.* Careful questioning will show that the pain is premenstrual, and is usually relieved when the menstrual flow is established.

5. *Dyspareunia.* The close proximity of the inflamed or spasmodic ureter to the vaginal fornix explains the presence of this symptom.

6. *Eye-Symptoms.* Most patients complain of burning and watering of the eyes when reading, and it is seldom one sees a patient with ureteritis who has not recently consulted an oculist.

PATHOLOGY

The nature of ureteritis is such as to preclude the removal of tissue for histological examination. Advanced cases with definite stricture formation show round-cell infiltration and fibrous-tissue formation.

The rich anastomosis with lymphatics of the cervix and seminal vesicle encourages infection from these sources,

with fibrosis in the adventitia which interferes with peristaltic contraction by limiting the wave of dilatation that precedes the contraction as it passes down the ureter. In addition patches of pseudo-membrane, i.e. thickened unhealthy mucosa, tend to diminish the lumen of the ureter and lead to stagnation of urine which encourages infection.

In other cases septic foci, teeth, tonsils, gall-bladder and bowel may be the underlying cause of a peri-ureteritis.

DIAGNOSIS

A careful and detailed history should establish a diagnosis of ureteritis, despite the absence of urological symptoms. As often as not nothing abnormal is found in the urine and it may be sterile on culture, but usually the patient will admit that periodically the urine is cloudy and has a strong odour.

A history of previous attacks of pyelitis may be obtained.

INVESTIGATION

Pyelography. Except in advanced cases, intravenous pyelography, apart from excluding other lesions, is of little value. In long-standing cases there may be some clubbing of the calyces and a somewhat tortuous and irregularly dilated ureter. Retrograde pyelography often gives more information, an irritable and spasmodic ureter empties more rapidly, and, in more advanced cases with inflammatory changes leading to sclerosis in the submucosa and muscularis and interference with neuro-muscular mechanism, ureteral atony results with marked delay in emptying and stagnation.

Cystoscopy. The diagnosis of ureteritis is facilitated by the character and location of the pain reproduced during cystoscopic examination; it is therefore an advantage to do the examination under a local anaesthetic, with the full co-operation of the patient. Unfortunately, with the advent of sodium pentothal anaesthesia, most patients refuse to submit to cystoscopy without a general anaesthetic.

The bladder on examination may be normal. More frequently, however, evidence of chronic inflammation is present in the form of generalized congestion, punctate trigonitis or pseudo-membranous cystitis; patches of pseudo-membrane surround the internal meatus and ureteric orifices and are scattered over the trigone.

If the cystoscopy is done under a local anaesthetic, as the catheter is advanced up the ureter the typical pain is reproduced, according to the zone of the ureter involved. A retrograde pyelogram is then done, pictures being taken in the erect position, and time plates to estimate whether there is any delay in emptying.

In some instances the pain may not be reproduced by the passage of a small catheter, but will be by the passage of a ureteric bulb; frequently, on withdrawing the bulb, a shower of debris (desquamated epithelium) will be seen to come from the ureteric orifice.

TREATMENT

Ureteral Dilatation. A ureteric catheter should be passed into the renal pelvis, and any residual urine removed by

aspiration and its quantity noted. Then 3 or 4 c.c. of 2% argyrol are instilled into the ureter, after which ureteric bulbs are introduced, commencing with F 7 or 8; resistance may be felt where the spasm is located not only in passing up the ureter, but also on withdrawal of the bulb. A mild dilatation only should be done, and should any bleeding occur nothing further should be done, for any trauma to the mucous membrane only leads to the formation of cicatricial tissue, the very factor one is trying to correct.

Should any organism be isolated from the urine the appropriate antibiotic should be used. In addition antispasmodics such as belladonna are of value. The patient should then be given a course of intravenous 10% calcium gluconate, which often completely relieves any further tendency to spasm.

Short-wave diathermy is recommended by some authorities. In advanced cases, with a degree of peri-ureteritis, denervation of the ureter will give complete relief of pain. In a number of cases sympathectomy was done with little, if any, relief and a complete ureterolysis proved to be far more effective.

COMMENT

The fact that the ureter may be the cause of intermittent attacks of abdominal pain is not sufficiently recognized and taught. Examination of the urine and intravenous pyelography reveal no abnormality, and the condition is frequently overlooked. Patients are subjected to various operative procedures without any relief, or with temporary relief due to the complete rest in bed. Some of the symptoms described, e.g. pain in the right hypochondrium with abdominal distension suggest gall-bladder disease; pain in the right iliac fossa, appendicitis; lower abdominal pain and dysmenorrhoea, some gynaecological trouble. Faith in the profession becomes shaken and the patient is considered neurotic; in some instances the acute depression and irritability so characteristic of the condition has led to a diagnosis of psychoneurosis and even melancholia.

SUMMARY

Ureteritis or ureteric spasm is a definite clinical entity. The lesion shows a predominating incidence in the female. The symptomatology, diagnosis and treatment are discussed.

PROBLEMS IN LOWER ABDOMINAL PAIN

THE NEUROLOGICAL AND PSYCHIATRICAL ASPECTS*

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Since this is essentially a surgical symposium, the subject will be discussed with that aspect in view. In the problem of lower abdominal pain the neurological and the psychiatric approaches are quite distinct from each other and will be dealt with separately. In neither section will an attempt be made to give a list of possible causes of abdominal pain.

NEUROLOGY

Neurologists frequently see patients who have been referred for symptoms apparently of a neurological nature, but in whom the etiological factor is subsequently found to be more within the sphere of other specialties such as internal medicine or orthopaedics. Lower abdominal pain is one of the symptoms that at times may be placed in such a category.

Segmentally, the lower abdomen receives its innervation from the lower dorsal and the upper lumbar spinal cord. Hence it is a simple deduction that lower abdominal pain, neurologically induced, reflects pathology in the corresponding level of the cord or its issuing nerves. It does, however, sometimes happen that disorder at a higher level, even as high as the cervical cord, may affect fibres coming from much lower down. Lower abdominal pain can seldom be the major problem in neurology that it is in surgery, but there are occasions when the neurological origin of this symptom may prove difficult of diagnosis.

Usually one may expect other complaints as well in such cases, but even in their absence physical signs should provide a lead. These may have to be looked for, but as with so many other problems, if a reasonably careful history be taken and a short while spent on the general examination, mistakes should be rare. An interview limited to a few minutes coupled with nothing more than an inspection and palpation of the abdomen cannot be expected to unearth rarer causes of abdominal pain.

Apart from the nowadays rarely-seen tabetic crises there must be few neurological lesions which can resemble an acute abdominal catastrophe. Where difficulty is likely to arise therefore is in those patients who may be suffering from a condition suggestive of some subacute or chronic intra-abdominal pathology. It is in such that certain features in the history may be important. Root pains have certain characteristics; they tend to be lancinating, and often periodic; their distribution in the abdomen is girdle, though not necessarily bilateral—i.e. they radiate from the back round the side to the front, or vice-versa. If this type of localization be associated with radiation down the thigh, the inference is even stronger. Aggravation by straining, coughing or sneezing is very indicative of root pressure.

Obviously not all neurologically induced pain is of root origin. Backache, numbness and tingling, and weakness, ataxia and sensory and reflex changes suggest that some condition other than intra-abdominal pathology is being dealt with. A similar suspicion should arise if abdominal

* A paper read at the South African Medical Congress, Johannesburg, September 1952.

pain occurs where there is a known history of spinal cord disease, or where there is a story of previous disorder or of recent trauma involving the vertebral column.

Consideration of first principles will indicate the type of pathology that could involve the area under discussion. Abnormality may affect the roots, the nerves, the vertebral column, the meninges, or the cord. A list of causes would thus be redundant; it is the site, rather than the nature of the pathology, that determines the symptoms. Such pathology may be limited, e.g. an expansion, or a disc, or it might be a localized manifestation of a general condition, e.g. syphilis. A prolapsing nucleus pulposus in the lower dorsal area may result in attacks of lower abdominal pain strongly suggestive of intra-abdominal mischief. So too, post-herpetic pain may be severe, persistent and misleading. Postural and structural defects of the spinal column may cause nerve pressure and referred pain—a segmental neuralgia; in such cases pain in the abdomen is not uncommon; these cases may be the patients who find chiropractors so successful.

Metabolic diseases such as diabetes and uraemia may result in abdominal colic, and this may be associated with neurological signs, or followed by coma, thus coming into the orbit of the neurologist. Lead poisoning and drug sensitivities might have similar consequences. A metabolic disorder frequently misdiagnosed is porphyria; the condition would appear to be not as rare as has been supposed. Attacks of acute abdominal pain associated with vomiting and constipation are a common manifestation of porphyria, and these often occur before the onset of neuritis or mental changes; this pain can be so severe that with few exceptions these patients have had one or more emergency laparotomies before a diagnosis is reached.

PSYCHIATRIC CONSIDERATIONS

Since the advent of psychosomatic thinking, the whole medical profession is becoming more aware of emotional conflict as a cause of illness, and of the disability that can arise as a result of frustration and resentment. One realizes that surgeons, from the nature of their training and their work, find difficulty in believing that anything so unsubstantial as psychopathology could result in genuine pain. Therefore (apart from the rare malingerer) one must stress that, irrespective of the dynamics involved, a patient who complains of pain feels pain. He does not 'imagine' it. It is true he may be in a state of hyper-awareness and may thus interpret normal physiological processes as pathological stimuli.

The word 'functional' is often employed as a sort of euphemism for 'imaginary'. Actually the term 'functional' is well chosen. It is not only organic pathology that can excite disorders of, or changes in, the normal functioning of a viscus or end-organ. Biochemical factors, environmental influences and nervous stimuli can, separately and collectively by various mechanisms, affect the responses of the body—in other words, they may result in a change in behaviour or function. Such alteration is thus truly functional in nature, though the exciting cause may well be emotional or nervous, and not pathological in the Virchow sense of the word. It is nevertheless real and can often be measured or assessed.

A symptom, whether it be pain or some other discomfort, is thus always real to the sufferer, so that it is not only factually incorrect, but it is also bad therapy, to accuse a patient of imagining symptoms. It is equally fallacious to assume that organic pathology is entitled to respect, whereas psychogenic symptoms imply that the patient is a weakling deserving of contempt; the woman with dyspareunia may well be a better asset to the community than her sister with a pyosalpinx!

Usually, if a little time is spent on the history, the manner in which the patient gives the story will suggest that the complaint is psychogenic. A lack of specificity in a description of the pain, and an inability to define even approximately its manner of onset, its periodicity, its duration and manner of cessation, etc. should put the surgeon on his guard. Absence of physical signs will confirm this suspicion.

Pain in the pelvis or abdomen due to psychiatric causes, is often a vague ill-defined ache rather than a specific pain. A careful interrogation may reveal that exacerbations and remissions are related to environment, or to motivational factors; e.g. a lower abdominal pain which improves when the husband is away or which is alleviated by going on vacation suggests there may be a psychological reason for the pain.

There are several psychological mechanisms which may be associated with abdominal pain as a symptom—*anxiety, guilt, identification, hysteria, etc.* but there is not time to deal with them in detail. No real difficulty should arise in recognizing the hypochondriac with his host of complaints and never-ending tale of woe. Although one must accept the fact that these unfortunate sufferers' complaints are quite genuine, they remain a burden to their doctors; we should be extremely cautious before subjecting this type of patient to surgery. Unless some definite pathological condition is found on examination, and the indication to deal with this is strong, these patients should surgically be left well alone.

The subjection of a patient to operation in the hope that thereby a symptom may be alleviated is to be deprecated. Psychiatrists see many patients who in addition to their emotional tensions and maladjustments have had unwise abdominal and pelvic surgery performed. Such therapy may render the future handling of the patient more difficult, for there may have arisen a fixation in the patient's mind, and the diagnosis of an organic condition is more acceptable to his self-esteem. The recurrence of symptoms after operation creates resentments between patient and surgeon, and vice-versa, and this helps further to direct the patient's attention away from the real etiology. It would not be overstating the position to suggest that severe psychological disorder can occur as a result of unwise surgery, especially the type of surgery based on an attempt to cure an ill-defined pelvic discomfort.

It has been mentioned that though the etiology of pain may be psychological the actual dynamics if its production may be physiological. Such emotional factors appear to operate via the hypothalamus and result in an 'imbalance' of the autonomic system; thus it must be accepted that maladjustment and conflict can be associated with and responsible for such entities as spasm of bowel, ureter



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or uterus. In such cases (and these are not rare) psychotherapy achieves better results than ureteric dilatations or other similar mechanical interference.

The question of sex must not be neglected. Lower abdominal pain may be an escape mechanism—an unconscious attempt to avoid unpleasant marital contacts. Such a case would be entirely a psychological problem. However, faulty technique or inability to achieve orgasm can also result in a long history of pelvic pain. It would seem reasonable to assume that in such people the pelvic organs may be unduly congested. Recognition of the cause and remedial measures can result in gratifying relief.

From what has been said it would follow that if a positive diagnosis of the cause of abdominal pain be made the best therapy available will be recognized as a matter of course. Surgery which has not a rational basis, and which is used purely on the off-chance that it might help

the patient, frequently has the opposite effect. This is especially the case when the etiology is psychogenic. In such cases the pain may serve a purpose, and it not the symptom, but the disease that requires treatment.

Finally, the diagnosis of psychological disorder must be made on positive grounds and not purely by a process of exclusion. Usually these patients are easily recognizable from the way they give their history. A brief family history will soon reveal whether there are any grounds for insecurity, for instance broken homes, unfavourable surroundings, etc. An enquiry into the marital history and also into sexual habits may be revealing. A past history of anxiety, of 'nervous attacks', of vague ill-health or of previous useless operations will suggest psychopathology. The association of other symptoms such as frequency, dysuria, diarrhoea, leucorrhoea, etc. does not preclude a psychogenic diagnosis.

LOW BACK PAIN

A CLINICAL APPROACH

J. STRUAN ALEXANDER, M.B., B.S., M.R.C.S., D. PHYS. MED.

Durban

We are on firm ground when we recognize that the management of low back pain is a difficult and, in some respects, an unsatisfactory problem. In spite of a voluminous literature there remains a diversity of view point as to diagnosis and treatment.

There are inherent obstacles which frustrate scientific investigation. The functional anatomy of the low back is complex, and the lesion is deep seated. There is a paucity of objective evidence and clinical deduction from large numbers of cases is invalidated by the variable course of the individual case. Undue digression into the field of contentious hypotheses only serves to further complicate a difficult syndrome. Nevertheless, when current concepts are reviewed in broad perspective it will be manifest that a more rational basis for diagnosis and for treatment begins to emerge. A great majority of cases as seen in a hospital department conform to acceptable clinical patterns.

PATHOGENESIS

The following classification is arbitrary and in its sequence reflects the frequency of incidence of the different types. It makes no pretence to include all sources of low back pain:

Over 80% of cases are due to mechanical strain with or without derangement of structure. This group will include ligamentous tears, lesions of the apophyseal joints and lesions of the intervertebral disc.

Osteo-arthritis of the lumbar spine, psychosomatic low back pain, and fibrositis of the soft tissues are rarely the primary cause of low back pain. Yet one or more of these conditions is a common complicating component of mechanical low back strain.

Low back pain is a symptom of many diseases of bone

and joint which are demonstrable in X-ray films. This group will include such conditions as Paget's disease, ankylosing spondylitis, primary and secondary neoplasm of bone, and tuberculous disease of the spine.

Finally low back pain may be associated with visceral or pelvic pathology.

INVESTIGATION

A careful analysis of symptoms, and the disclosure of all skeletal abnormalities, will usually result in a composite picture which places the case in one or other of the classes listed under pathogenesis. In hospital practice one is impressed with the large number of patients whose occupation imposes excessive strain on the low back. Psychogenic overlay is the bugbear of low back pain. If we get past the unco-operative attitude of these patients it will be found that the tenacious pessimism is rooted in a misconception as to the nature of their disability. Such misconceptions may have been reinforced by the failure of various forms of treatment. The importance of X-ray examination is manifest, and in hospital practice this procedure has become routine in all but mild cases.

DIAGNOSIS

In broad terms diagnosis should not present undue difficulty, for, as has been said, more than 80% of cases are mechanical in nature resulting from strain. More precise definition of the lesion is by no means so simple, but the intensity of symptoms will give a guide as to whether we are dealing with a soft tissue lesion, a lesion of the apophyseal joints, or a disc lesion. It is useful to have certain criteria on which to establish the diagnosis of a lesion of an intervertebral disc. Cardinal features are recurrent attacks of low back pain (traumatic) of increas-

ing severity, an attack of such intensity that it immobilizes the patient, lumbar scoliosis with paravertebral spasm, and finally sciatic root irritation. Radiological findings are no more than contributory evidence.

Osteo-arthritis of the lumbar spine, as a firm diagnosis, is a ready escape from inability to relieve symptoms. It is common experience to have gross osteo-arthritis of the lumbar spine with negligible discomfort, and, on the other hand, severe pain may co-exist with minimal osteo-arthritis. The significance of radiological osteo-arthritis should be assessed on the merits of the case.

Fibrositis is out of fashion as a primary cause of pain. However, it is a frequent complicating symptom in all forms of low back pain.

Psychogenic overlay is characterized by the inconsistent pattern, the failure of all forms of treatment, and the resistant mental attitude of the patient. Psychogenic overlay may well be a fruitless diagnostic addendum. It has a ring of finality that implies an absolution of the practitioner from further responsibility. Emotional disorder varies within the widest limits. At the one extreme is the frank anxiety-state with low back pain as its physical component, and, at the other extreme is the patient with chronic low back strain in whom recovery is delayed because of a loss of faith in the efficacy of treatment and the unfounded fear of permanent disablement.

Disease of bone or joint is a definite diagnosis which is confirmed by the characteristic radiological findings.

Intractable pain with no remission at night arouses the suspicion of metastases in the lumbar spine.

In the last 20 years we have rightly seen a swing away from the belief that in women the common origin of low back pain is pelvic disease or malposition of the uterus. Referred low back pain of pelvic origin has its own particular features, and is distinguished by a total absence of abnormal skeletal signs.

PROGNOSIS

It is rarely justifiable to give an unqualified assurance of uninterrupted recovery. Degenerative changes in the lumbar spine, under the impact of stress and strain, tend to become progressive. A cautious approach is particularly apt in acute traumatic low back pain, for intractable symptoms may call for a period of hospitalization. A sharp deterioration in the chronic case will also call for a change of policy, and in both instances, specialist advice is desirable, and the question of surgical operation will have to be considered. Keeping in mind that a major set-back occurs in but a very small proportion of cases, it is sound policy to give the patient an understanding of the nature of the disability and the rationale of treatment.

TREATMENT

When low back pain is a symptom of definite disease of bone or joint the treatment will be that appropriate to the condition and need not here be considered further.

In mechanical low back strain of all types treatment is by no means so straightforward. More than a dozen different methods are in common use, and, alone or in combination, they have their enthusiastic adherents. Yet no specific form or system of therapy has been established as a routine. Success in treatment is dependent on the

choice of an appropriate form of therapy, and, above all, its correct timing.

Rest. As in all forms of skeletal trauma rest is the mainstay of treatment. It is not uncommon to find that an artisan struggles to carry on with his work during the acute phase of an intervertebral disc lesion, with lumbar scoliosis and spasm. This failure to rest in the acute stage is likely to lead to a chronic and intractable disability. In the acute stage of low back pain complete bed rest is insisted on and is reinforced with adequate sedation for the relief of pain. In the chronic type of case benefit results from short periods of rest during the day, with the patient lying prone.

Heat. A variety of forms of heat are available, ranging from the homely hot water bottle to short-wave diathermy. The latter holds pride of place as a means of reducing pain and spasm and shortening the course of the disability.

Remedial Exercises. Special exercise programmes have been developed and these should be initiated under expert supervision. In the recovery stage of an acute attack exercises are designed to mobilize the rigid lumbar spine. A disuse weakness is found in the chronic case and a vigorous build-up of the low back and abdominal muscles is as effective a measure as quadriceps exercise in derangement of the knee joint.

Manipulation. This contentious form of treatment is approached with an open mind. The manipulator applies his art with two different objectives. In the long-standing case manipulation aims at breaking down adhesions and mobilizing the lumbar spine. On the other hand, in the early acute stage it aims at correcting a displaced disc or apophyseal joint. It is reasonable to suggest that there should be a precise knowledge of the derangement, and that the manoeuvre employed should be specific for that derangement, and not merely the application of force in all and every direction in the hope that something will fall into place. Manual manipulation is for the expert. Traction of the lumbar spine makes an immediate appeal as a rational application of force and it is devoid of risk of further damage. Results are most encouraging.

Psychosomatic Low Back Pain. If a frank anxiety state is the dominant disability it may be advisable to refer the patient to the psychiatrist. A so-called psychogenic overlay may be greatly alleviated by dispelling unfounded anxieties as to the nature and course of the symptoms. In this way a more confident tone is established. The effects of physiotherapy will be greatly enhanced by simple psychotherapy in the form of reassurance and suggestion.

Massage. Adapted to the phase of the attack massage is soothing and relieves spasm. Friction of fibrositic nodule is a method of choice in certain selected cases.

Procaine infiltration gives temporary relief. Infiltration of lumbar spinal roots is said to have immediate, and at times dramatic, results.

Deep X-ray therapy has a special value in advanced osteo-arthritis of the spine.

Supporting Apparatus. Various forms of belt or spinal brace have the effect of immobilizing the lumbar spine. Such supports are prescribed for the acute stage of the

disc lesion, and also for intractable cases who have recurrent traumatic episodes of low back pain.

In conclusion it must be recognized that a minority of cases make very slow progress, and in practice it is advisable to review unresponsive cases in the light of the fullest clinical re-examination before a chronic disability becomes firmly established. Moreover it must be remembered that a lesion of the intervertebral disc may call for surgical operation for the relief of symptoms.

SUMMARY

In light of modern concepts low back pain is presented in broad perspective as a clinical problem. An arbitrary classification of pathogenesis is given, which reflects the

frequency of incidence of commoner types of low back pain.

No digression is made into the more hypothetical fields of diagnosis, and it is stressed that the great bulk of cases as seen in hospital departments result from mechanical strain with or without definite lesion of bone or joint.

It is argued that the term psychogenic overlay calls for amplification.

Popular forms of treatment are listed. Special attention is directed to the importance of rest in the acute stage. A more confident approach is advocated in the established case, with a vigorous programme of local heat and special exercises, and where necessary, simple psychotherapy.

THE PLACE OF ALLERGY IN SOUTH AFRICAN MEDICAL PRACTICE*

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It is generally agreed that about 10% of any population suffers from major allergic conditions but that more than 50% is subject to minor allergic episodes of various kinds. There is little doubt that the actual number of allergic sufferers is increasing even allowing for the greater medical and lay recognition of the allergic state. Such an increase is not surprising because the allergic tendency is inherited by the children of allergic persons and because industrialization fosters a progressively increasing sensitization of men and women employed in the manufacture of or using a variety of synthetic chemical products. The ambit of allergic manifestations has also been extended in recent years because of the sensitization effects of the sulphonamide drugs and more especially of the antibiotic preparations. While the use of these substances has revolutionized the therapy of certain infectious diseases their clinical employment has perhaps been excessive. Even a trivial bacterial infection rarely escapes antibiotic therapy. The beneficial effects are usually prompt but the possibility of sensitization sequelae is often overlooked. It is estimated that allergic reactions caused by penicillin, including urticaria, vesicular eruptions, purpuric rashes and even respiratory allergic conditions, occur in 2-5% of persons after internal use of the drug. The incidence of reactions from local application of penicillin is so high that this mode of administration is to be deprecated. There is, moreover, some evidence that antibiotic therapy may upset the allergic equilibrium of a person to the extent of his developing a hypersensitive state to substances other than the antibiotics used. A 38-year-old European miner in Johannesburg, for example, with no previous allergic manifestations whatsoever, began to suffer from almost continuous attacks of urticaria a few months after penicillin treatment for acute tonsillitis. He has acquired a hypersensitivity to egg which now gives rise to nausea and vomiting.

A number of diseases not usually regarded in the past

as of allergic origin are now thought to have such a basis. Hypersensitivity plays an important rôle in diseases which are primarily allergic where symptoms follow from association with agents not themselves harmful, and also in diseases where invasion by micro-organisms has occurred resulting in the secondary sensitization of the body tissues and a greater susceptibility to damage by their products. The collagen vascular diseases, including rheumatic fever, rheumatoid arthritis, periarteritis nodosa and disseminated lupus erythematosus, constitute an important group of diseases characterized by focal collagen and vascular lesions of a type that strongly suggests hypersensitivity as a factor in their pathogenesis. The hypersensitivity to drugs in primarily allergic diseases may produce a variety of visceral lesions, including pneumonitis, myocarditis, periarteritis nodosa and glomerulonephritis. In cardiovascular allergy the patho-physiological alterations result from contraction of smooth muscle and increased capillary permeability. Participation of the heart in anaphylactic reactions has been demonstrated in animals where oedema, haemorrhages, leucocytic infiltration of the vessel walls, desquamation of endothelium, thrombosis and necrosis may occur. The clinical manifestations are urticaria, angio-neurotic oedema and purpura, and might also include heart arrhythmias, angina pectoris and coronary artery disease.

Central Nervous System. There is no reason why the central nervous system should not function as the shock organ in the hypersensitivity state in the same way as the skin, mucous membranes and other tissues. It is because of this that the possibility of an allergic origin should not be overlooked in morbid manifestations referable to the nervous system and not otherwise etiologically explained. There is a wide field for research into the allergic aspects of neurological and possibly also psychiatric conditions. Allergic headache is a well-recognized entity and is generally due to food hypersensitivity. The relationship of migraine to food allergy is not definitely established but a proportion of the sufferers are satisfactorily controlled

* A paper read at the South African Medical Congress, Johannesburg, September 1952.

by diet-elimination methods and every migraine patient should be given the benefit of allergic investigation.

Gastro-intestinal Allergy. The subject of gastro-intestinal allergy is of much interest and its occurrence should be borne in mind in clinical diagnosis. Acute upsets of the digestive tract of allergic origin frequently occur and may simulate abdominal emergencies such as perforated gastric ulcer, appendicitis, gall-bladder disease, acute pancreatitis and renal colic. Intestinal allergy is however generally associated with other allergic phenomena which give a clue to the etiology. The physician having eliminated organic factors in gastro-intestinal conditions should not overlook the food or other allergens in indigestion, flatulence, nausea and vomiting, headaches, colic and diarrhoea. A discerning physician who recognizes the allergic possibilities in these cases is able to prevent much suffering and discomfort in patients who otherwise become despondent in their fruitless efforts to obtain relief. It should be remembered that food sensitivity may also be manifested by allergic respiratory symptoms such as recurrent colds, sneezing, sinusitis and itching of the eyes or nose.

Allergy of the ear not infrequently occurs. Eczematous conditions of the external auditory meatus and adjacent structures may be associated with sensitivity to drugs, foods and bacteria. Cosmetics and soaps should be remembered in this connection. Allergic oedema occurs in the middle ear producing fullness or even a dull pain or burning in one or both ears, diminished or marked loss of hearing, itching at the back of the nose and also nausea. Eosinophils may be found in the aspirated secretions but these cells are obscured by the neutrophils present if a superimposed infection has occurred. Allergic factors should be considered in recurrent acute otitis in children and even chronic otitis media may be allergic in origin. The symptoms of allergy of the inner ear—tinnitus, vertigo and partial deafness—are due to the oedema of parts of the cochlea or vestibular apparatus. Associated allergic manifestations are suggestive.

Allergic skin conditions are no different in this country from those found elsewhere, but the failure to recognize the fact that allergic sensitivity may be responsible for certain forms of dermatitis and eczema is unfortunately common. The use of medicated ointments and lotions cannot ameliorate the basic condition but may initiate further sensitivities and expose the hypersensitive skin tissues to superimposed infection and further complications. Allergic eczema requires that careful, specialized attention that should be given to any allergic condition. Urticaria and contact dermatitis are usually readily recognized as allergic in origin but varieties of dermatitis, purpura, eczema and skin rashes, secondary to bacteria and fungus infections, not infrequently escape this diagnosis.

Ophthalmological. The allergic factors in ophthalmological practice also are being appreciated to an increasing extent. Urticaria and eczema of the eyelids are often correctly diagnosed as of allergic origin, and so also are the contact dermatitis effects of cosmetics around the eyes. Allergic conjunctivitis may be the sole manifestation of the sensitivity to pollen or other inhalant substance. Spring catarrh occurring in persons with other allergic manifesta-

tions or with a family history of allergy may or may not be truly seasonal and eosinophils are often seen in conjunctival smears. The allergens aetiologically related to the condition may however be elusive, for pollen tests do not always reveal the cause. Keratitis, corneal ulcers and episcleritis are occasionally allergic in origin, as also are iritis, iridocyclitis and uveitis. Atopic cataract has been described and retinitis and even optic neuritis have been regarded as allergic in some cases.

THE PROBLEM OF ALLERGY IN SOUTH AFRICA

The problem of allergy in South Africa is both simple and difficult. It is simple in regard to seasonal pollinosis.¹ Summer hay fever (October–March) is the most important and is due to grass pollen, while winter-spring hay fever (June–October), which occasionally occurs, is due to cypress pollen.² Cases of hay fever sometimes occur in the spring due to the inhalation of the pollen of certain local trees flowering for a brief period at that time. The pollen of veld and garden compositae may produce hay fever in persons more or less intimately associated with these plants at any time of the year. Ragweed pollinosis, so prevalent in America, does not occur in South Africa.

The problem is simple also because the extent of industrial allergy is as yet relatively small. The modern view of adequate control in industrial allergy is not confined to the consideration simply of the contact with a sensitizing allergen, but embraces the associated social, emotional and occupational factors. In this country carpenters, cabinet makers and other woodworkers are seen who are hypersensitive to different varieties of wood,³ with symptoms of contact dermatitis or respiratory allergy. Desensitization with specific wood extracts has proved successful in such patients with vasomotor rhinitis and bronchial asthma. Millers and others in South Africa in contact with dusts of cereals may develop asthma, and lucerne sensitivity is not uncommon. Respiratory allergy occurring in the summer due to the inhalation of the fine dust of the dry powdered bodies of the sewage fly (*Psychodia* sp.) should be watched for in those engaged on or living in the vicinity of sewage works.⁴ More or less serious reactions due to bee stings⁵ are met with in South Africa, particularly in the rural area. The use of bee protein extracts in desensitization should be recommended for hypersensitive persons who cannot by the nature of their residence or employment avoid contact with bees.

Respiratory Allergic Conditions.

The allergy problem in South Africa is difficult because of the relatively high incidence of the respiratory allergic conditions of the endogenous type. Bronchial asthma and more particularly allergic vasomotor rhinitis, especially in young people, are common conditions and generally present difficulty to the attending physician and to the ear, nose and throat surgeon, to whom nasal allergy patients so frequently gravitate. It is regrettable that in this country the general practitioner does not play a greater rôle in screening these patients from the specialist in nasal conditions because the nasal symptoms are but a manifestation of a general underlying physical or psychological aberration. The removal of tonsils and adenoids, or correcting a deviated septum and cauterizing the mucous membranes,

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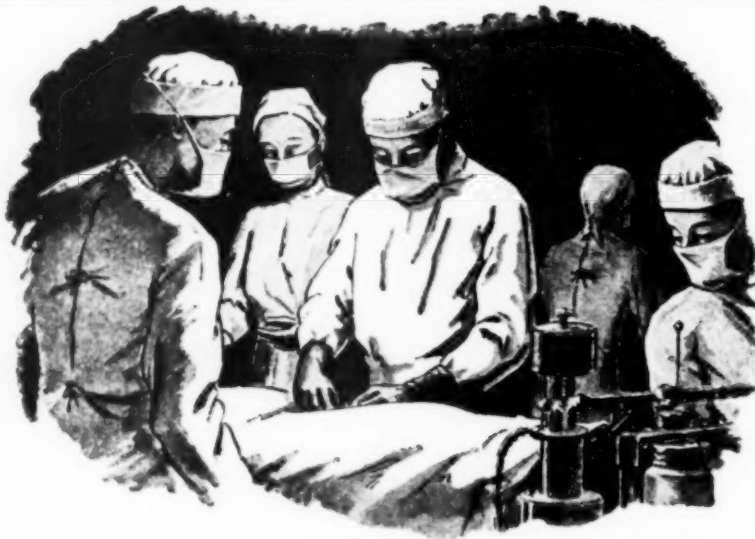
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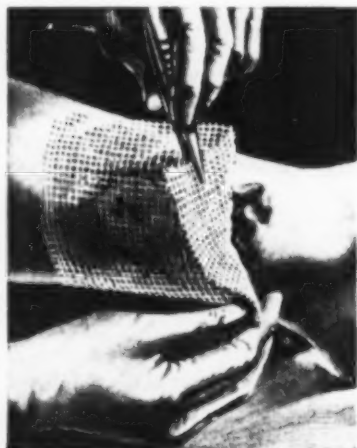
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seems harsh treatment for a hypersensitivity to cow's milk or to dog hair or for a maladjusted personality. There is no question of the advisability of surgical interference when polypi block the nostrils or where a superimposed infection turns the oedema fluid of a paranasal sinus into pus. Prompt treatment is then urgently required but when this is given the underlying allergic conditions must be attended to lest the pus return and the polypi reappear. But as far as possible allergic methods should be tried before operating. Polypi often show recession after allergic treatment. Whenever possible a surgical procedure in a basically allergic person should be delayed until the allergic condition has been controlled, and should in this country at any rate be carried out in the winter months to avoid the possibility of grass pollen sensitivity supervening in the traumatized allergic person.

The approach to allergic vasomotor rhinitis⁶ has already been discussed and repetition here is unnecessary. Emphasis however must be laid on the importance of early recognition of the condition and its differentiation from infective rhinitis. The child suffering from repeated colds, constant sniffing, sneezing, blocked or running nose, spasmodic coughing or recurrent bronchitis is very probably a victim of upper respiratory allergy. The mucous membranes of the nose and paranasal sinuses are characterized by pallor, boggy and possibly polyposis. Microscopic examination of the nasal secretion or post-nasal discharge will show the presence of eosinophils together with neutrophils if infection has supervened. The instillation of nosedrops or similar local therapy is hardly desirable except as a temporary measure. The aim of treatment should be to keep the patient's allergic tendencies under control and to prevent a relatively minor respiratory allergy developing into the more serious major malady.

Treatment of Allergy in Children.

Child sufferers from nasal or paranasal sinus allergy of even the mildest types should receive meticulous prophylactic attention. Even in the breast-fed baby the appearance of nausea, vomiting, colic or rashes may indicate altering the mother's diet. Prophylaxis during the infancy of children of allergic parents may pay dividends insofar as their future health is concerned. In any event if the child with the asthmatic tendency can by careful control be maintained free from attacks for a few years he is more likely to remain free in the future. The avoidance of allergens such as feathers, house dust and animal hair in the early years of life can be undertaken by the intelligent mother on the doctor's instruction. Dust-free sleeping rooms should be insisted on and the use of sponge-rubber pillows and mattresses and plain washable cotton and woollen blankets should be advised. The food sensitivities in childhood are also subject to control. All too often one listens with growing distress to the parents' account of their child who, always nauseated by milk, was made amenable thereto by physical or moral compulsion, or how an egg was constantly given because of its wholesomeness as a food although a rash invariably followed its ingestion. Elimination of the simple foods of the young infant's diet is admittedly not easy but substitution nutriment should not be beyond the wit of the medical

practitioner or the pediatrician if the penalty of persistence in the allergenic diet is appreciated. The psychogenic control of the young allergic person is of great importance, for there is little doubt about the intimate association of the emotional state with the more obvious allergic factors.

The cure of an allergic condition sometimes occurs naturally. But that is no justification for failing to provide proper allergic management to the child on the supposition that he will 'grow out of it'. He may—but he may not. Recession of symptoms may also occur in an adult with suitable treatment, but control of an allergic condition rather than cure generally reflects any satisfactory result obtained. The aim is to secure homeostasis—a physiological balance—in which the trigger action of infection, endogenous and exogenous allergens, or physical and psychological trauma, will not bring about an explosion into allergic manifestations.

Climate.

It is becoming increasingly apparent that in South Africa the allergically balanced person is liable to break down in the warm, humid atmosphere on the Eastern shores of this country. Allergic respiratory conditions are not notifiable and it is impossible to refer to figures, but the impression, constantly being confirmed, is that bronchial asthma and allergic vasomotor rhinitis are very prevalent on the East coast and that an allergic subject who maintains good health on the high veld or elsewhere in this country may readily develop symptoms on the East coast, more particularly during the spring and summer months. The warmth and dampness of these areas suggested moulds as the responsible allergenic agent but our studies have not confirmed this to be the case. The matter is still under investigation but the medical man should be guarded in permitting his carefully-controlled asthmatic or vasomotor rhinitis patients to proceed to the East coast and in any event should warn them of the advisability of promptly returning at signs of a recurrence of symptoms.

Allergic vasomotor rhinitis of course occurs elsewhere than on the East coast, and in Johannesburg the condition is by no means uncommon in children and in adults. The reasons for this incidence are not always clear, but the dust in the atmosphere, the marked and sudden diurnal temperature changes especially in the colder weather, and the rarified air of the highveld altitude, may separately or together exert the trigger action in the allergic person.

Allergic manifestations may have their characteristic patterns and be readily recognized, but a hypersensitivity factor may escape the attention when it occurs in and modifies another specific disease. Attention to that factor may be essential in restoring the sufferer to health. Allergic conditions demand certain well-defined measures which should however not be isolated from the whole therapeutic approach to the patient. Allergy is part of the wide field of medical knowledge and can be understood and practiced only in that sense. When the physician is satisfied that an allergic factor is dominant or operating in a condition the patient should be given the benefit of the specialized knowledge and techniques of the allergist. And here lies the crux of the matter. There are not many practitioners and medical specialists in South Africa, as

indeed in many other countries, who have had the interest and the opportunity to devote much time to the theoretical and practical aspects of the allergic state. It is on this account that allergy—a Cinderella in medicine—begs for admission to the halls of medical practice and seeks recognition with the other sisters. It is important that more attention should be given to the study of allergy in the medical curriculum and that post-graduate lectures and demonstrations to medical men should be made available.

Allergy Clinics.

The out-patient departments of even the larger hospitals in South Africa are rarely equipped to deal satisfactorily with the allergic sufferers from the diagnostic and therapeutic points of view. History-taking with an eye to allergic possibilities is usually inadequate. Skin-testing to confirm the influence of possible allergens on patients is too often done in routine fashion. Extracts of substances are frequently ordered for desensitization purposes on the basis of skin tests alone without an appreciation of their interpretation or significance. Desensitization if carried out at all, is relegated to a nurse or junior houseman whose interest in and understanding of the procedure, not surprisingly, are of the slightest. It is an anomaly in these days that every hospital does not boast of an Allergy Clinic with a competent allergist in charge, to whom the physician, the dermatologist, the otorhinolaryngologist, the ophthalmologist and the pediatrician can send their patients for allergy consultation as regards diagnosis, immediate treatment and future prophylaxis.

An Allergy Clinic in the larger hospitals would serve an even greater purpose as a training place where undergraduate and post-graduate medical students would gain an insight into the present-day handling of the allergic patient. Further, the Allergy Clinic would lend itself to and indeed provoke much-needed experimental and clinical research into allergic conditions. Our own studies on the subject of allergy in the Bantu suggest that further research would be rewarded with fundamental knowledge about allergy. The introduction of ACTH and cortisone into the medical armamentarium has been of value in the temporary control of certain types and phases of the allergic syndrome

and their use has proved most favourable in intractable asthma, status asthmaticus and severe drug reactions. These substances however cannot be regarded as substitutes for more basic allergic management. Investigations into the treatment of allergic conditions are urgently required. Allergy Clinics in hospitals would form a nucleus for clinical and laboratory studies in the many problems that allergy presents.

SUMMARY AND CONCLUSIONS

The apparently increasing numbers of allergic sufferers in South Africa, as elsewhere, are represented in the offspring of allergic parents, in the subjects of sensitization in industry and in the recipients of the newer therapeutic, chemical and antibiotic agents.

Manifestations of allergy are discussed in relation to general medicine and its special branches, and the importance of many minor allergic states is emphasized.

The problem of allergy in South Africa is regarded as simple in pollinosis where grass pollen only is of significance, and because industrial sensitization is not yet extensive. The problem is regarded as difficult because of the relatively high incidence of endogenous bronchial asthma and allergic vasomotor rhinitis.

Prophylactic procedures in children of allergic tendency are considered.

Attention is drawn to the fact that a patient whose respiratory allergy is otherwise adequately controlled is liable to experience recurrence of symptoms in the warm, humid climate on the Eastern shores of Southern Africa.

The study of allergy and the allergic factors in disease is urged as worthy of inclusion in the medical curriculum.

A plea is made for the establishment of Allergy Clinics in the out-patient department of at least the larger hospitals in South Africa for the benefit of allergic sufferers, for the educational value to medical students and physicians and for the promotion of research in allergy.

REFERENCES

1. Ordman, D. (1947): *S. Afr. Med. J.*, **21**, 38.
2. *Idem* (1945): *Ibid.*, **19**, 142.
3. *Idem* (1949): *Ibid.*, **23**, 973.
4. *Idem* (1946): *Ibid.*, **20**, 32.
5. *Idem* (1951): *Ibid.*, **25**, 411.
6. *Idem* (1950): *Ibid.*, **24**, 393.

MEDICO-LEGAL

THE SOUTH AFRICAN MEDICAL AND DENTAL COUNCIL

RULES REGARDING CONDUCT OF WHICH THE COUNCIL MAY TAKE COGNIZANCE

The Minister of Health, under the Medical, Dental and Pharmacy Act 1928, has (in Government Notice 1923 of 1953) approved the following amendment of the rules:*

By the substitution for the existing sub-rule (f) of rule 4 of the following:

'(1) For a medical practitioner to carry on a regularly recurring itinerant practice at a place where a medical practitioner is established, unless his practice provides a full and satisfactory service to his patients similar to and at the same cost as the service he would provide for in the area in which he is domiciled.'

* See this *Journal*, **27**, 332 (18 April 1953).

By the substitution for the existing rule 19 of the following:

'19. PROFESSIONAL APPOINTMENTS

A. Medical Practitioners.

(1) Acceptance by a medical practitioner of any professional appointment unless—

(a) a notice inviting applications for such appointment shall have been advertised in the public press and in a South African Medical Journal;

(b) details of the proposed contract are made available to *bona fide* inquirers and to the Council on request;

(c) the contract of appointment is in writing and sets out clearly the services which the medical practitioner agrees to

render and the fees or remuneration which will be payable by the party appointing him, to him for such services;

(d) the contract provides that the medical practitioner shall receive fees or remuneration for the services which he renders only from the party with whom he has contracted, and that that party undertakes liability therefor;

(e) the fees or remuneration provided for in the said contract are on a basis which is not derogatory to the medical profession or inimical to the interests of the public;

(f) the contract is such that it does not or is not calculated to serve as a means of advertising the name or practice of an individual medical practitioner or partnership of medical practitioners;

Provided that this rule shall not apply to—

- (i) appointments made under the Public Service Act;
- (ii) the appointment of medical practitioners to academic or research posts at Universities, research institutions and similar public institutions.

Note.—Any renewal of a contract or any alteration in the terms and conditions of a contract shall be regarded as a new contract, in which case the above requirements must be complied with *de novo*.

(2) Permitting his name, profession, qualifications or address to appear on cards, handbills, pamphlets, or notifications of any kind which refer in any way to him holding the said appointment; but this shall not preclude a benefit society notifying its members personally and confidentially of the names and addresses of medical practitioners holding appointments to the said society.

(3) Failure by any medical practitioner who has accepted an appointment under this rule to submit for inspection by the Council the contract referred to in this rule within 30 days from the date of posting of a demand therefor in a

registered letter from the Registrar of the Council addressed to such medical practitioner at his address as shown in the Register; provided that upon good cause shown by such medical practitioner this period of notice may, in the discretion of the Council, be extended.

B. *Dentists.* (Omitted.)

BRITISH PHARMACOPOEIA (1953 EDITION)

The Acting Minister of Health, under the Medical, Dental and Pharmacy Act 1928, has (in Government Notice 1953 of 1953) determined that the 1953 edition of the *British Pharmacopoeia* and any official addendum thereto shall be used for the purpose of section 79 of the Act with effect from 1 November 1953. Previous relevant notices are cancelled. (The effect of this is that the new edition of the B. P. and its addenda shall be followed in the preparing of medicines prescribed by a medical practitioner, dentist or authorized veterinarian.)

AMENDMENTS TO THE REGULATIONS REGARDING VACCINATION AGAINST SMALLPOX

The Minister of Health, under the Public Health Act, 1919, has amended the Regulations regarding vaccination against smallpox (*inter alia*) by:

The deletion of the word 'calf' wherever it appears in existing regulations 12 and 13. (The effect of this is that in supplying vaccine lymph to district surgeons, public vaccinators, Government medical officers, medical practitioners, local authorities and others, the Government need not necessarily supply calf lymph; and in carrying out vaccination under the Act and Regulations, district surgeons, public vaccinators and other medical officers need not necessarily use calf lymph.)

ASSOCIATION NEWS : VERENIGINGSNUUS

RAILWAY MEDICAL OFFICERS' GROUP

The next Annual General Meeting of the Railway Medical Officers' Group will be held at the Railway Sick Fund Board Room, Adderley Street, Cape Town, on Saturday, 10 October 1953, at 9.30 a.m.

DIE GROEP SPOORWEGGENEESHERE

Die volgende algemene jaarsvergadering van die Groep sal in die Bestuurskamer van die Spoorwagsiektefonds, Adderleystraat, Kaapstad, op Saterdag, 10 Oktober 1953 om 9.30 v.m. gehou word.

THE BENEVOLENT FUND

The following contributions to the Benevolent Fund during August 1953 are gratefully acknowledged:

Votive Cards: In Memory of:

Dr. W. H. Myburgh by Dr. H. Egerton Brown,
Dr. H. Aneck-Hahn and Dr. D. A. Fowler.
Dr. J. Riesnick by Dr. I. Friedman.
Dr. I. Woods by Dr. R. B. Peckham and Dr. M. Findlay.
Dr. David Roger by Dr. George A. Dunlop.
Dr. A. M. Pollock by Dr. H. J. Louw, Dr. J. Cunard and Dr. L. L. Alexander, East London Division, Border Branch.
Dr. K. Bremer by Dr. E. M. Chubb, Mrs. M. S. MacQueen, Dr. A. Marais Moll, President and Council of Cape Western Branch, Dr. A. I. Goldberg and S.A. Medical and Dental Council, Pretoria.
Mrs. A. J. van der Spuy by Mrs. J. Price Jones.
Dr. C. H. Kruger by Dr. A. Marais Moll.
Mr. A. A. Balsillie by Dr. A. Marais Moll and Dr. A. I. Goldberg.
Dr. S. W. Leary by Dr. Lance Knox and Dr. H. Renton.

Miss Swallow Neethling by Dr. Vernon Brink.
Mr. Max Stevens by Dr. and Mrs. W. Gilbert.

Total amount received from Votive Cards £35 13 0

Services rendered to:

The daughter of Dr. N. Mallach by Dr. L. Lichtenstein.
Mr. H. W. Birch by Dr. P. Leftwich.
Dr. C. de Wet by Dr. J. S. du Toit.
Mrs. E. L. Dimeik by Dr. C. J. Blumenthal.
Dr. Mathew Friedland by Dr. J. S. du Toit.
Widow of Dr. L. F. McDowell by Dr. R. W. Pickering.
A relative of Dr. J. B. Baynash by Dr. B. M. Jacobson.

Total amount received from Services rendered £19 9 0

Donations:

Dr. T. H. R. Bohlmann £1 1 0
Total £56 3 0

PASSING EVENTS

Birth. Jackson.—On 6 September 1953 at the Simpson Maternity Hospital, Edinburgh, to Dr. Leoné Jackson (formerly Pertz), wife of Dr. Frank Jackson, a son.

Dr. Mark Horwitz of the Department of Medicine, University of Cape Town, has returned to Cape Town after attending Medical Congresses in Geneva and The Hague.

UNION OF SOUTH AFRICA : DEPARTMENT OF HEALTH

BULLETIN No. 36 OF 1953, FOR THE 7 DAYS ENDED
THURSDAY, 3 SEPTEMBER 1953

PLAGUE

Nil.

SMALLPOX

Nil.

TYPHUS FEVER

Cape Province. No further cases have been reported from the Lusikisiki district since the notification in Bulletin No. 32 of 6 August 1953. This area is now regarded as free from infection.

EPIDEMIC DISEASES IN OTHER COUNTRIES

At date of latest available information there existed:

Plague: Nil.

Cholera in Bombay, Calcutta, Kakinada, Madras, Tiruchirappalli, Visakhapatnam (India).

Smallpox in Bombay, Cochin, Kanpur, Madras, Masulipatnam, Nagapatinam (India); Lahore (Pakistan); Haiphong, Hanoi, Saigon-Cholon (Vietnam); Phnom-Pehn (Cambodia).

Typhus Fever in Cairo (Egypt).

INTERNATIONAL CONGRESS OF OPHTHALMOLOGY

The International Council of Ophthalmology has decided to extend the scope of its 17th International Congress by a 2-day preliminary session in Montreal, Canada, on 10 and 11 September 1954. Those who attend both meetings will travel to New York on 12 September and the opening ceremony of that part of the Congress will be held in the grand ballroom of the Waldorf-Astoria Hotel on 13 September. The New York session will continue through Friday, 17 September.

A single registration fee will cover both the Montreal and the New York sessions. Administrative affairs of the Congress will continue to be handled through the office of the Secretary General, Dr. William L. Benedict, 100 First Avenue Building, Rochester, Minnesota, U.S.A.

WHO EXPERT COMMITTEE ON RABIES

The World Health Organization Expert Committee on Rabies met in Rome on 14 September 1953 and subsequent days. It was the second session of the committee in 3 years. The members are mostly from laboratories in France, India, Iran, Israel, Spain, Switzerland and U.S.A.

Recent advances in knowledge of rabies were discussed, particularly various improvements in types of vaccines for human and veterinary use (including the successful use of canine vaccination in several countries), the treatment with hyperimmune serum of persons bitten by rabid wolves (Iran), and local treatment of wounds in laboratory animals (Spain). The publication of the WHO *Manual of Laboratory Techniques in Rabies* was under consideration.

Complete control of rabies in dogs has been achieved in a number of countries like Switzerland, England and the Scandinavian countries, but the problem remains acute in areas where large numbers of wild animals remain in contact with domestic dogs. The disease has been diagnosed in practically every kind of susceptible wild animal, but certain species persistently stand out as principal transmitters. In North America, the fox, the skunk and the coyote are the chief sylvatic culprits, and for the rest of the Western Hemisphere, the mongoose and the vampire bat must be added to the list. In the Eastern Hemisphere, the chief wildlife vectors

are the jackal, the wolf, the mongoose and the fox. In South Africa the yellow mongoose, the genet cat and other *viverridae* are incriminated.

THE SIR CHARLES HASTINGS CLINICAL PRIZE ESSAY COMPETITION

The following (in summary) are the rules governing the Sir Charles Hastings Clinical Prize Essay Competition, which was established by the British Medical Association for the promotion of systematic observation, research and record in general practice; and the Charles Oliver Hawthorne Clinical Prize, which has been added as a second prize:

The prize for the best essay is a certificate and 50 guineas, and for the second-best essay a certificate and 40 guineas.

Any member of the Association (or the Medical Association of South Africa) who is engaged in general practice is eligible to compete. Former prize winners are eligible.

The work submitted must include personal observations and experiences collected by the candidate in general practice rather than comments on previously published work, though reference to relative current literature should not be omitted. Work already published is not eligible. Each essay submitted must be typewritten or printed. It must be unsigned, and accompanied by a note of the candidate's name and address. No definite limits are laid down as to length, but a length between 3,000 and 10,000 words is suggested.

Essays, or whatever form the candidate desires his work to take, must for the current competition be sent to the Secretary, British Medical Association, B.M.A. House, Tavistock Square, London W.C.1 not later than 31 December 1953. Inquiries may also be addressed to the Secretary.

EMPIRE MEDICAL ADVISORY BUREAU

South African medical practitioners who are thinking of visiting the United Kingdom should get into touch with Dr. H. A. Sandiford, Medical Director of the Bureau, at B.M.A. House, Tavistock Square, London, W.C.1, so that all the facilities of the Bureau will be placed at their disposal.

Medical practitioners will find the Bureau helpful in arranging accommodation as well as post-graduate courses of study.

DIRECTOR OF DENTAL RESEARCH

Professor J. T. Irving, Professor of Physiology at the University of Cape Town, has been appointed Director of the Dental Research Department which has recently been established jointly by the University of the Witwatersrand and the S.A. Council for Scientific and Industrial Research. He will assume duty on 1 February 1954.

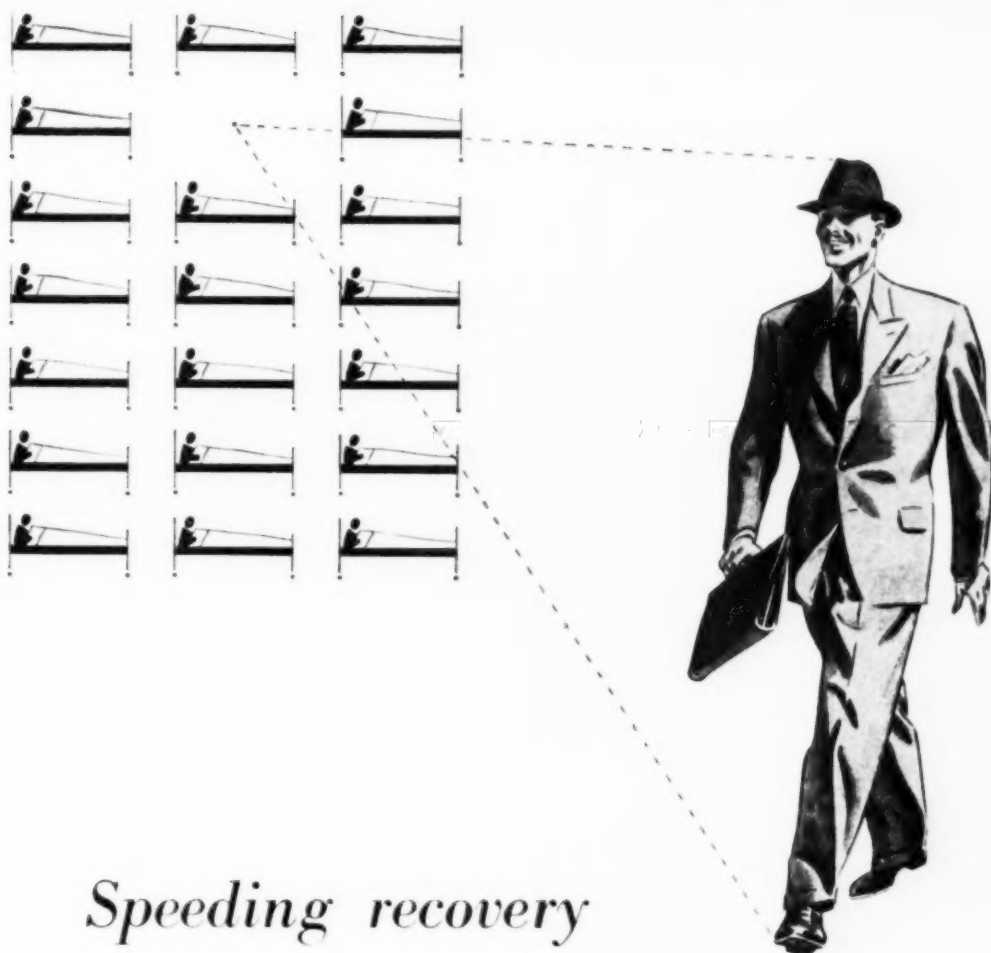
The main aim of the Department, which will be located in the University Oral and Dental Hospital at Milner Park, is to study dental and oral disease in South Africa.

Professor Irving was born in New Zealand and studied at Cambridge University and Guy's Hospital, London, taking the degrees of M.A., Ph.D., M.D., Cambridge. After lecturing at Bristol University and Leeds University he was appointed Head of the Physiology Department at the Rowett Research Institute, Aberdeenshire. He was appointed Professor of Physiology at the University of Cape Town in 1939.

In 1947 Professor Irving was a visiting professor for 6 months at the University of Illinois College of Dentistry, and 4 years later accepted a visiting professorship at the Dental College of the University of Pennsylvania for 6 months. He has carried out a great deal of research and is a Research Fellow of the University of Cape Town.

PNEUMONIA

The Acting Minister of Health (Government Notice No. 1986 of 11 September 1953) has rescinded the Government Notice formerly in force, in terms of which acute primary pneumonia and influenzal pneumonia were declared to be notifiable diseases within the municipal area of Cape Town. The effect of this is that acute primary pneumonia and influenzal pneumonia, which have been notifiable in Cape Town by medical practitioners since 1919, are no longer notifiable there.



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Vitamin D	2,400 I.U.	Pyridoxine	1 mg.
Ascorbic Acid . . .	50 mg.	Calcium d-Pantothenate . .	5 mg.
Thiamine Chloride .	1.5 mg.	Mixed Natural Tocopherols	
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IN MEMORIAM

DR. NORMAN FELDMAN

Dr. H. C. Falcke and Dr. S. Miller (Johannesburg) write: Dr. Norman Feldman died in Johannesburg on 28 August 1953 after a short illness. His death came as a profound shock to his friends, colleagues and patients. He was 35 years old.



Dr. Norman Feldman

Norman Feldman was educated at the Jewish Government School and Athlone High School, Johannesburg. The opportunity to study medicine did not present itself immediately and it was only after working for 4 years that he commenced his studies at the University of the Witwatersrand in 1939, where he obtained his B.Sc. degree in 1941, and M.B., B.Ch. in 1945.

Throughout his student days he was always an acknowledged leader, and represented the students on numerous committees, including the Students' Medical Council and the Students' Representative

Council. After graduating he maintained his interest in student affairs and was the post-graduate representative to the Students' Medical Council. In 1951 he was elected chairman of the Medical Graduate Association and was largely responsible for the introduction of post-graduate refresher courses. He joined the staff of the Coronation Hospital in 1946 and immediately interested himself in the Paediatric Department, where he finally held the position of Assistant Paediatrician.

In 1952 he was granted a John Adams Scholarship and

went overseas for a year. During this period he obtained the M.R.C.P. (Edin.) and the D.Ch. (Lond.) and did a great deal of post-graduate study, particularly in the field of bone disorders in which he was keenly interested.

Dr. Feldman wrote several papers on various medical subjects which were published. He submitted a thesis on *Rickets in African Babies* for his M.D. degree—a subject to which he devoted a great deal of time.

The record of Norman Feldman's academic achievements is but a small indication of his outstanding character and devotion to his profession. Those who knew him and worked with him admired and respected him for his clear thinking and logical approach to the problems that confronted him; he was a constant source of stimulation to his colleagues. He imbued the nursing staff with enthusiasm and they were his devoted assistants. He was tireless in his efforts and never failed to do all that was humanly possible for his small patients, whom he loved dearly.

Norman Feldman was a loyal friend—kindly, sympathetic and understanding—nor did he ever permit race, creed or political considerations to colour his relationship with others. 'It was his to fill your need.'

Dr. Feldman was only a young man when he died, but he had achieved much. Mankind was enriched by his living, and his tragic passing leaves an irreparable loss. To his wife, daughter and family we extend our heartfelt sympathy in the death of so noble a man as Norman.

'There are those who give and know not pain in giving, nor do they seek joy, nor give with mindfulness of virtue;

You give but little when you give of your possessions. It is when you give of yourself that you truly give.'

HENRY WELLCOME CENTENARY

The centenary of the birth of Sir Henry Wellcome which has just been commemorated in London, recalls the career of a great figure in the world of pharmacy.

One hundred years after his birth on 21 August 1853, the name of Wellcome, and the organization he founded in 1880 hold the respect of scientists everywhere. There can be few if any countries which have not benefited from the way in which he stimulated research, the fruits of which have done much to cure disease and alleviate human suffering. This is particularly so in lands where malaria, schistosomiasis, amoebic dysentery, leprosy, kala azar, and other tropical diseases are indigenous.

International in outlook, Wellcome travelled to many countries and saw at first hand the ravages of disease and the dire needs of the populations. A great philanthropist, he set up the many research organizations which bear his name.

In 1901 he founded the Wellcome Tropical Research Laboratories at Khartoum for the study of tropical diseases in man and animals. In 1905 he set up the Wellcome Medical Hospital Dispensary, Uganda. A year later he established

a floating research laboratory on the Upper Nile for the study of tropical diseases. In 1908 he started the Publication Trust Fund, under the direction of the Chinese Medical Association, to provide standard medical books translated into Chinese. Most notable of all, however, in the field of tropical medicine was the establishment of the famous Wellcome Laboratories of Tropical Medicine in London.

Wellcome was born in Wisconsin, U.S.A., but it was after he came to London, a comparatively young man, that he developed his great business and made his name famous. He became a British subject in 1910, and among the many honours he received in that country was a knighthood from King George V in 1932.

The name 'Tabloid', which he invented for his products, is a well-known pharmaceutical trade mark.

After Wellcome's death in 1936 his will provided that profits declared as dividends from his commercial undertakings should be devoted in perpetuity to medical and scientific research.

REVIEWS OF BOOKS

NURSES' MEDICAL DICTIONARY

Baillière's Nurses' Medical Dictionary. By Margaret Hitch. (Pp. 502. Thirteenth Edition. 5s.) London: Baillière, Tindall & Cox.

Baillière's Nurses' Medical Dictionary, so ably compiled and revised by Miss Margaret Hitch, is now in its thirteenth edition, which says all that is necessary with regard to the

usefulness and excellence of this miniature encyclopaedia. It seems almost incredible that so much wisdom can be packed into a small volume of the most comfortable pocket size. And it is entirely due to Miss Hitch's profound knowledge of the needs of her readers, and her untiring, scholarly research, that she has been able to produce a medical book of reference of so compact a size and one which contains no word too many, nor one too few.

A NEW JOURNAL OF HISTOCHEMISTRY

The Journal of Histochemistry and Cytochemistry, Vol. 1, No. 1, January 1953. Official Journal of The Histochemical Society. (Pp. 1-86. Annual Subscription: 60s.) Baltimore: The Williams & Wilkins Company. London: Baillière, Tindall & Cox, Limited.

Contents. 1. Determination of β -Glucuronidase in Microgram Quantities of Tissue and its Distribution in the Cow Adrenal. 2. Stable Sudanophilia in Human Neutrophil Leucocytes in Relation to Peroxidase and Oxidase. 3. Biochemical Heterogeneity of the Cytoplasmic Particles Isolated from Rat Liver Homogenate. 4. Cytochemical Observations on Chicken Monocytes, Macrophages and Giant Cells in Tissue Culture. 5. Comparative Distribution of Succinic Dehydrogenase in Six Mammals and Modification in the Histochemical Technique. 6. Histochemical Titles from Current Literature. Announcements.

It is with dubious feelings that we greet any new journal, but as a small compartment of science grows people come to devote themselves entirely to it, form specialist societies, and in time publish a journal. We all know that the chemistry and enzymology of tissues and cells has reached a stage of logarithmic growth. What were in times gone by merely empiric staining reactions are now fast becoming tests for the identification and localization of definite chemical substances in tissues and cells. From the list given of histochemical titles in current literature it is obvious that histochemistry has a large family of original papers boarding out in other journals and no proper home to call its own. This journal cannot hope to accommodate all this material but it will help in this and provide a centre of information about the scattered literature of the subject.

The names of the editorial board are a guarantee that the material published will be of high quality. The papers in this issue are interesting, well produced and excellently illustrated.

THERAPEUTICS

Therapeutics in Internal Medicine. By 84 Contributors. Edited by Franklin A. Kyser, M.D., F.A.C.P. (Pp. 830 + xxi. Second Edition. \$15.00.) New York: Paul B. Hoeber, Inc. 1953.

Contents: Contributors. Preface to the Second Edition. I. Infectious Diseases. 1. Diseases due to Viruses. 2. Diseases due to Bacteria. 3. Fungal Diseases. 4. Rickettsial Diseases. 5. Bartonella Disease. 6. Protozoan Diseases. 7. Diseases of Doubtful Origin. II. Parasitic Diseases. III. Diseases of Metabolism. IV. Fluid and Electrolyte Balance. V. Diseases of the Glands of Internal Secretion. 1. Diseases of the Suprarenal Glands. 2. Thyroid Disease. 3. Parathyroid Disease. 4. Ovarian Disease. 5. Testicular Disease. VI. Deficiency Diseases. 1. Vitamin Deficiencies. VII. Diseases of the Digestive Tract. 1. Diseases of the Mouth, Esophagus and Stomach. 2. Diseases of the Small Bowel and Colon. 3. Diseases of the Liver and Biliary Tract. 4. Diseases of the Pancreas. VIII. Diseases of the Respiratory Tract. 1. Diseases of the Trachea and Bronchi. 2. Diseases of the Lungs. 3. Diseases of the Pleura and Pleural Cavity. 4. Diseases of the Mediastinum. 5. Functional Respiratory Disease. IX. Diseases of the Cardiovascular System. 1. Diseases of the Heart. 2. Diseases of the Blood Vessels. X. Diseases of the Blood and Blood-Forming Organs. XI. Diseases of the Urinary Tract. XII. Diseases of the Locomotor System. XIII. Diseases Due to Allergy. XIV. Diseases Due to Physical Agents. XV. Diseases Due to Intoxications. 1. Acute Poisonings with Newer Insecticides and Rodenticides. XVI. Diseases of the Nervous System. XVII. Diseases of the Skin. XVIII. Symptomatic Treatment. Appendix: Useful Diets and Tables. Index.

One cannot in a limited review go fully into details of the 18 chapters by the 84 contributors who have combined in this book to present a comprehensive account of modern therapeutics. Whereas most recent monographs on medical treatment are published in synopsis form, this volume possesses the advantage of easy reference combined with descriptive writing.

A text-book written by numerous authorities often loses the merit of consistency, but the editor, Professor Kyser of North Western University Medical School, Chicago, has preserved an accessible style throughout.

The ground covered is enormous and varies from pediculosis to phaeochromocytoma, each chapter being compiled with appropriate references and including discussions of controversial problems of therapeutics. Individual preferences are stated.

The section on infectious diseases is up to date and includes details of nursing, antibiotic therapy and prophylaxis.

Welcome chapters are those devoted to symptomatic treatment (which includes a warning against the indiscriminate use of drugs and chemotherapy), and the presentation of

useful diets and tables with a distinct warning that successful therapy depends on accurate diagnosis and that symptomatic treatment must not be an end to itself, but serve only as an adjunct to diagnosis and special therapy.

Physiotherapy and remedial exercises in chest and in chronic nervous diseases are well set out in considerable detail.

This work is rich in prescriptions, a fast disappearing facility among practitioners, who nowadays depend on the manufacturing chemists to compound proprietary mixtures, which adds to the cost to the patient.

In the reticuloses and leukaemias, etc. pros and cons of radioactive isotope therapy are fully discussed and evaluated. The chapter on hypertensive vascular disease—with so many cases in hospital and in private—is comprehensive and immensely helpful both to the consultant and to the general practitioner. 'Heart Disease in the Surgical Patient' written by Kyser is of great interest and value; it discusses all the different risks in detail and describes pitfalls, and this is the first occasion on which I have seen the subject so well presented in a therapeutics text-book. An appendix of useful diets precedes the index.

I have no hesitation in recommending this book: it is a valuable reference.

LITERATURE ON PLASMA CELLS REVIEWED

Citomorfolgia e funzione del plasmocita. By Renato Curletto. (Pp. 126, with 32 figures. L.1200.) Pisa: Edizioni Omnia Medica. 1953.

Contents: I. Considerazioni preliminari. Concetto di plasmareticolo e derivazione dei plasmociti. Funzione dei plasmociti. II. Aspetti citoplasmatici: (A) a carattere costante (i) basofilia (pironinofilia) (ii) arcoplasma. (B) a carattere incostante (formazioni paraplasmatiche) (i) vacuoli (a) gocce vitree ed aspetto vacuolare (Schauumzellen) (b) gocce ialine (c) corpuscoli di Russel (formazioni concentriche di Teilmu und corpi basofili di Snapper) (iii) cristalli proteici (iii) fenomeno di shedding e "citoplasmoclasti". III. Aspetti nucleari: (A) (i) aspetto a cromocentri (ii) cromidi. (B) nucleolo. (C) membrana nucleare. IV. Considerazioni generali: (A) rapporto quantitativo tra matrice plasmacellulare (midollare) e protoplasma. (B) fase di massima attività dei plasmociti. (C) concetto di paresi funzionale plasmocitaria. (D) importanza delle modificazioni qualitative dei plasmociti e formula plasmocitaria. V. Spiegazione delle figure. VI. Bibliografia.

This is a review of some of the literature on plasma cells, rather carefully selected to support the author's thesis that the plasma cell by shedding of its cytoplasm produces plasma globulins. The many cases encountered in which there are gross numerical changes in plasma cells without alteration in plasma globulins are explained by stipulating that only certain stages of the developing plasma cell are functionally active, e.g. the mature cell has already thrown off its globulins and is therefore inactive. A morphologico-functional count of plasma cells is now suggested to supercede the usual simple numerical count, but studying the microphotographs produced to illustrate this new classification it becomes apparent that a visit to Milan is an essential part in the acquisition of the technique.

Like much continental medical literature the book is wordy and difficult to read for those used to Anglo-American writing; it is marred by many interjections, more footnotes, and many spelling mistakes especially in the quotations in other languages. The same carelessness is obvious in the references: many names quoted in the text do not occur in the bibliography. The book is stimulating in a way, but too often does the stimulation become an irritant.

AIDS TO GYNAECOLOGY

Aids to Gynaecology. By W. R. Winterton, M.A., M.B., B.Ch., F.R.C.S., F.R.C.O.G. (Pp. 196 + v with 15 figures. Eleventh Edition. 6s.) London: Baillière, Tindall and Cox.

Contents: 1. The Female Genital Organs. 2. The Physiology of Menstruation. 3. Examination of Gynaecological Cases. 4. The Disorders of Menstruation. 5. External Genitalia. 6. Diseases of the Vagina. 7. Displacements of the Pelvic Organs. 8. Inflammatory and Allied Conditions of the Uterus and Vagina. 9. Tumours of the Uterus. 10. Diseases of the Fallopian Tubes. 11. Diseases of the Ovaries. 12. Pelvic Infections. 13. The Bladder. 14. Sterility. 15. Abortion. 16. Congenital Abnormalities, and Acquired Atresia. 17. Gonorrhoea. 18. Gynaecological Endocrinology. 19. Gynaecological Operations. Index.

Since the last edition in 1947, many advances have been made and the 1953 edition has been extensively revised. This small

book is primarily intended for students and tries to compress the subject into 188 pages. Inevitably many important points are omitted and the result is a very sketchy outline of the subject.

The section on ovarian diseases is over-simplified and here, as elsewhere in the book, etiology is insufficiently considered.

Nevertheless, the book will be found of value to the student who wishes to revise the subject in a short time.

A NEW SURGICAL JOURNAL

The American Surgeon, Vol. XIX, No. 1, January 1953 (Pp. 1-94, Annual Subscription 82s.) Baltimore: The Williams & Wilkins Company. London: Baillière, Tindall & Cox, Limited.

Contents: 1. The Problem of Carcinoma of the Lung. 2. Some Interesting Tumors in the Renal Region. 3. Osteoid Osteoma of the Lamina and its Treatment. 4. Treatment of Recurring Intestinal Obstruction by the Plication Procedure. 5. The Technic of Adequate Common Duct Exploration Using a New Type Flexible Probe and Dilator. 6. Annular Pancreas. 7. Partial Gastrectomy for Peptic Ulcer. 8. Diverticulitis or Carcinoma of the Colon? 9. The Clinical Significance of Prolapsed Gastric Mucosa. 10. Femoral Arteriovenous Fistula with False Aneurysm. 11. Acute Pseudomembranous Enterocolitis Simulating Acute Surgical Diseases of the Abdomen. 12. Treatment of Hernias in Infants and Young Children. Editorial—Hypertrophic Scars and Keloids. Announcement—Southeastern Surgical Congress.

This journal has for years past been known as *The Southern Surgeon*. It is the official publication of the Southeastern Surgical Congress of America and is now published for the first time as a more general surgical journal under the new name *The American Surgeon*. It is not at present on the bookshelves of South African medical libraries. The editorial staff and board contain several names known throughout the English-speaking world. The contents of the present number indicate a wide enough field of interest. As is to be expected, the subject matter and method of presentation are of a high order.

It may be argued that there are too many surgical textbooks; but the same can probably never be said of journals, as each new one opens up an additional medium for expression of opinion and relating of experience.

This journal should be added to those available in our libraries and is suitable for the private collection of interested persons.

TEXTBOOK OF OPHTHALMOLOGY

Gifford's Textbook of Ophthalmology. By Francis H. Adler, M.D. (Pp. 488 + x, with 281 figures and 26 colour plates. South African price: £3 3s. 9d.) Fifth Edition. Philadelphia and London: W. B. Saunders Company, 1953.

Contents: 1. External Examination of the Eyes and Adnexa. 2. Examination of the Eye by Ophthalmoscopy. 3. Examination of the Eye by Other Objective Methods. 4. Functional Examination of the Eye. 5. Disturbances of Ocular Motility. 6. Optical Defects of the Eye. 7. The Orbit. 8. The Eyelids. 9. The Lacrimal Apparatus. 10. The Conjunctiva. 11. The Cornea. 12. The Sclera. 13. Iris, Ciliary Body, Pupil. 14. The Choroid and Vitreous Body. 15. The Lens. 16. Glaucoma. 17. The Retina. 18. The Optic Nerve. 19. Ocular Disorders due to Diseases of the Central Nervous System. 20. Ocular Manifestation of General Diseases. 21. Orientation of Surgical Operations on the Eye and Adnexa. 22. Therapeutic Agents used in Ophthalmology. Index.

It is refreshing to find a text-book that is different and one that has a new approach to old problems. Dr. Adler in re-writing Gifford's text-book has made an attempt at removing Ophthalmology from its insular status and incorporating some of its interests into the general pattern of medical practice. The result has been a small volume which embraces a field of common problems which beset not only the ophthalmic specialist, the internist, the general surgeon, and the neurologist, but the family doctor as well.

Of recent years the investigations on hyperpiesia have reaped a harvest of, sometimes, uncorrelated detail, and the chapter on the retinopathies and their relations to the accompanying vascular sclerosis is worthy of study.

Metabolic disorders and their related orbital disturbances have been satisfactorily sorted and presented in an intelligible and intelligent manner, the exophthalmos of thyroid origin being of particular interest.

The common ground between neurologist and ophthalmolo-

gist receives a chapter on its own and covers adequately in a brief space the close interrelationship of the two spheres.

Nor has the undergraduate been neglected in this book. He has the routine teaching of diseases of the various anatomical structures placed before him in a well-illustrated and lucid manner. To the busy practitioner too this volume has a wide appeal; it is clearly indexed and easy of reference.

For those who desire a wealth of detail on operation procedures or micropathology this book is not recommended, but for all members of the profession who, in their practices, have occasion to examine their patients' eyes—and who has not?—one cannot ask for a more concise or companionable volume.

There can now be no excuse for the oft-repeated saying, 'But I know nothing about eyes!'

THE CONCEPTION OF DISEASE

The Conception of Disease. By Walther Riese, M.D. (Pp. 120. \$3.75) New York: Philosophical Library, 1953.

Contents: Foreword. 1. The Stoic Conception of Disease. 2. The Platonic or Cosmological Conception of Disease. 3. The Anthropological Conception of Disease. 4. The Moral Conception of Disease. 5. An Excursion. 6. The Hippocratic or Historical Conception of Disease. 7. Medicina Prima (Baghvi). 8. The Galenic or Physiologic Conception of Disease. 9. The Anatomical Conception of Disease. 10. The Etiologic Conception of Disease. 11. The Social Conception of Disease. 12. The Psychologic Conception of Disease. 13. The Ontologic Conception of Disease. 14. The Biographic Conception of Disease. 15. Nosography and Biography. 16. The Metaphysic Conception of Disease. 17. Epilogue: Disease and Health. Footnotes. Index.

The author deals only with what we may call the conception of disease of the West. He begins with the stoics, to whom disease was an encumbrance resulting from man's own perverted judgment and who in this conception denied its existence. For Plato health was a state of harmony and disease a state of discord. With Hippocrates came a broader conception of disease called by the author the historical, which was later to be developed by Sydenham. 'Disease exhibits a genuine history of the operation of nature in the disease of mankind.' Disease is a sequence of events—symptoms are meaningless in themselves; they need to be traced back, and they likewise lead forward to prognosis. The Galenic concept is physiological: First came the study of the function disturbed. After that came the regional and the topical constituent of diagnosis. This aspect was later to be developed (it was only possible after the rise of anatomy in the Renaissance) by the founders of morbid anatomy—Morgagni, Bichat and Virchow. The third aspect of the Galenic approach was the examination of the type of lesion of the part involved, e.g. tumour, inflammation, stone or foreign body. Under the heading of the moral conception of disease the author discusses the thesis of increasing loss of happiness, and increasing uneasiness and discontent, with the advance of culture and civilization—Rousseau. With conscience came self-punishment, i.e. sin leads to disease, but in a sense different from the old one.

The more recent emphasis on the social aspects of disease is dealt with.

The author digresses now and then into such fields as 'disease and art', and at times the style is involved.

STUDY OF EXTRASYSTOLES

Extrasystoles and Allied Arrhythmias. By David Scherf, M.D., F.A.C.P., and Adolf Schott, M.D., M.R.C.S. (Pp. 531 + xv, with 212 illustrations. £5 5s.) London: William Heinemann Medical Books Ltd. 1953.

Contents: Preface. Acknowledgements. Introduction. 1. Historical Remarks. 2. Description of the Various Types of Extrasystoles. 3. Pararrhythmias. 4. The Coupling of Extrasystoles. Bigeminal Rhythms. 5. Alternans. 6. Flutter, Fibrillation and Paroxysmal Tachycardia. 7. Extrasystoles and the Nervous System. 8. Extrasystoles, Drugs and Electrolytes. 9. Some Mainly Physiological Aspects of Extrasystoles and of Ectopic Beats Generally. 10. The Localization of the Site of Origin of Extrasystoles. 11. Some Mainly Clinical Aspects of Extrasystoles and of Ectopic Automatic Beats. Index.

Extrasystoles are amongst the commonest clinical phenomena encountered in medical practice. 'Allied arrhythmias' cover practically all the other disturbances of rhythm with the excep-

tion of the abnormalities of conduction. It has long been suspected (and Schert has long been one of the proponents of the theory) that such departures from the usual mechanism of the heart-beat as auricular tachycardia, auricular flutter, ventricular tachycardia, etc. are nothing else than successions, usually regular, of extrasystoles from the corresponding site, and this has now been proved by Prinzmetal and his co-workers.

The authors point out that extrasystoles are seldom 'extra' beats in the sense of additional (they are only that when they are interpolated); they are 'extra' in so far as they originate outside of the sinus node, the site of origin of the normal heart beats, i.e. they are 'ectopic'. For practical purposes extrasystoles are premature beats; but the authors hesitate to call them that categorically because of the very, very rare extrasystoles which are not premature.

The authors prefer to classify extrasystoles into what they call (a) extrasystoles in the strict sense of the term, viz. 'ectopic beats with accurate coupling to the preceding beat', and (b) automatic beats—those not mathematically related in this way, including parasystole.

The causes of extrasystoles are innumerable. There is a wide range of symptoms complained of from extrasystoles; but very frequently they are symptomless, and patients or people may be completely unaware of having them. And as regards their significance, they are most times of no account but they may have a serious clinical or therapeutic meaning—irrespective of whether they are producing symptoms or not. Or perhaps it should be said that the extrasystoles which are most bitterly complained of are commonly those which are prognostically insignificant. On page 460 we find this noteworthy sentence: 'Not infrequently symptoms date from the moment the doctor told the patient that his heart action was irregular. . . . Once the patient's attention is focussed on his heart a vicious circle often starts, the patient's observing his heart's action more closely resulting in more numerous extrasystoles.'

No practising doctor can afford not to understand the study of extrasystoles thoroughly. This book has it all: the causation, the mechanism, the clinical and graphic features, the prognosis and the treatment—more fully than in any other book, and very extensively documented. The book contains more than 200 electrocardiograms; practically every known kind of extrasystole is represented and fully discussed.

There is a full discussion on the controversy on the recognition of right and left ventricular extrasystoles (and conversely left and right bundle branch block) from the E.C.G. On the etiology of extrasystoles we observe how varied are the causes of extrasystoles and how the medicaments used in their treatment may in themselves, under other circumstances, cause them. Interesting questions are raised and discussed on the significance of extrasystoles. It is usually recognized

that extrasystoles which increase or emerge after exercise are indicative of myocardial damage. What is the significance of extrasystoles not abolished by exertion? Is there any difference, in estimating the significance of extrasystoles, whether these are auricular or ventricular or nodal? And what is to be inferred from the occurrence of extrasystoles in cases of recent myocardial infarction?

PATHOLOGY IN SURGERY

Pathology in Surgery. By Edwin F. Hirsch, Ph.D., M.D. (Pp. 474 + xvii, with 388 photographs. 76s. 6d.) London: Baillière, Tindall and Cox Limited. 1953.

Contents: 1. Respiratory System. 2. Digestive System. 3. Urinary System. 4. Female Reproductive Organs. 5. Male Reproductive System. 6. Nervous System. 7. Liver, Gallbladder, Bile Ducts and Pancreas. 8. Bones, Joints and Skeletal Muscle Tissues. 9. Lymph Nodes and Spleen. 10. Ductless Glands. 11. Skin. Addendum. Index.

This book consists essentially of a collection of photographs of surgical specimens and of photomicrographs, in roughly equal proportions. The photographs and their reproductions are of a very high technical standard, and many illustrate lesions just as well as they can be illustrated in a half-tone block. A few demonstrate very clearly that even the best photograph of a surgically-excised tumour yields no information of any value to the reader, especially when there is no aid from the presence of organs or easily recognized normal structures. The usefulness of the excellent photomicrographs is lessened by the failure to give any magnifications. The greater part of the book then, roughly five-sixths, is to the credit of Miss Inez M. Porter, the photographer, whose name very properly appears on the title page.

The author has left himself roughly 70 pages in which to discuss pathology in surgery, a very difficult task, which he has made almost impossible by attempting to cover the entire field on a systematic regional basis. The result is almost inevitably that few sections are helpful and some are frankly absurd in their inadequacy. Too much of it merely catalogues the illustrations, and an added handicap is that much of it reads as if it had been badly translated into English.

The book cannot be recommended to pathologists, and surgeons may well regard with astonishment an author who starts the section on liver with this sentence: 'Unless a surgeon for some unusual reason, or by mistake, removes all or a large part of the liver, the tissues of the liver observed in surgical pathology are small biopsies'. But perhaps the surgeon accused of such careless complete hepatectomies, will appreciate the unconscious humour of the sentence which immediately follows it: 'Here, too, a large necropsy experience is valuable.'

CORRESPONDENCE

THE THYROID TREATMENT OF HYPERTENSION

To the Editor: I have read the paper of Bradlow *et al.* on the Effect of Thyroid Extract in Hypertension with great interest. Their experiment has not been quite as barren of results as they would have us believe, and I shall indicate shortly why I consider their conclusions to be unduly pessimistic.

Before considering the investigators' results there are 2 points arising out of their paper which call for comment. The first is the question of what constitutes a normal blood pressure; the second, the reason why clinicians of the calibre of Allbutt and Oliver, having noted a satisfactory response to thyroid administration in some cases of hypertension, failed to follow up so valuable a clue.

With regard to the first point, I feel strongly that the range of normal blood pressure is a wide one. Just as the normal pulse rate may vary between 40 and 90 per minute, so too may the normal range of blood pressure lie between 90/60

mm. Hg and 160/110 mm. Hg. Further, as I have indicated elsewhere, normal blood pressures can prove extremely resistant to even large doses of thyroid extract, for example:

Case 2, A. S. Age: 21. Obesity treated with thyroid extract.

Date	Blood Pressure mm. Hg	Thyroid Extract Daily	Weight
15/12/48	120/80	Gr. 10	210 lb.
12/1/49	120/80	Gr. 20	198 lb.
19/1/49	120/75	Gr. 25	not recorded
26/1/49	120/75	Gr. 25	190 lb.

In the early stages of my investigations, I considered patients with readings at 160/110 mm. Hg to be cases of early essential hypertension and was disappointed when in many instances I failed to bring down their blood pressures to 'normal'. Among the 105 cases which failed to respond

in my series of 334, the majority had blood pressures at about this level.

I feel now that such readings are not necessarily abnormal. They may be normal, they may be due to renal hypertension, they may be due to essential hypertension. If due to essential hypertension they will fall on thyroid administration; if normal or due to renal hypertension there will be no response.

Why did clinicians who had found that certain cases of hypertension responded to thyroid medication give up this treatment? Probably because they found that their results were not consistent. They felt that if thyroid insufficiency was the cause of hypertension then they should be able to bring down the blood pressure to 'normal' levels in the vast majority of cases. For on this hypothesis, hypertension would be an endocrine disease and they had already found that the response of myxoedema and cretinism to thyroid extract was consistent. As they could not account for the inconsistency in the treatment of hypertension they naturally concluded that they were wrong and desisted.

Goldblatt's demonstration that renal ischaemia is the cause of renal hypertension has now made it possible to account for their difficulties. I feel confident that the reason why a large proportion of cases (about 30%) do not respond to thyroid treatment and why about 55% respond only partially as far as the fall in blood pressure is concerned, lies in the frequent association of renal hypertension with essential hypertension. In fact, as I have insisted before, essential hypertension is the commonest cause of renal hypertension. The majority of cases of essential hypertension which come to us are not 'pure' but 'mixed', the essential hypertension being complicated by varying degrees of renal ischaemia—and hence of renal hypertension—in different cases. Short of the induction of extreme degrees of shock, I know of nothing which will lower a renal hypertension. It follows, therefore, that we must not expect from thyroid treatment the consistent successes we get when treating other endocrine deficiencies with the hormone concerned.

Let us now consider Bradlow's results. In all, 22 cases were treated. On the analogy of the results in my 2 series, about a third would fail to respond. The failures would be chiefly cases of renal hypertension, the result of nephrosclerosis in the majority of instances. Our investigators state that 2 of their cases appeared to be of renal origin (the cases with blood-urea estimations of 52 and 109 mg. % respectively). This is a reasonable inference, but to go on and say that the remainder were cases of essential hypertension is not. Their attitude is untenable because we have no way of telling whether a kidney is ischaemic or not, nor of estimating the degree of ischaemia when it is present. Assuming then that a third of the cases in any series would fail to respond, we are left with 15 out of 22 which should have responded. The authors concede 2.

In making up their minds as to what is to be considered a significant fall, they decided on 25 mm. Hg systolic and 15 mm. Hg diastolic. While this may be reasonable for readings in the region of 200/120 mm. Hg, I feel that for lower initial levels they have set their standard too high. On these grounds I should have regarded the following as positive responses: case 3, which fell from 163/94 to 140/84; case 11, from 197/120 to 193/109; case 13, from 176/107 to 171/97; case 22, from 167/110 to 163/103; and case 1, from 195/126 to 188/111; that is, 5 cases. It is interesting to note in passing that in case 4 and in all except one of these cases the diastolic pressure fell much more than the systolic—which is what one would expect from thyroid medication. Assuming then, that they are willing to concede cases 4 and 16, we find that they have achieved a favourable response in 7 out of 22, about one-third instead of two-thirds as one would have expected.

While on this question of the lowering of the diastolic pressure one might draw attention to another finding which one would also expect from thyroid treatment, namely, a rise in the pulse pressure. This occurred in 16 out of 22 cases, that is, in 69%. This figure of 69% intrigues me, for it is identical with the percentage which responded favourably in my series of 344 cases.

Reverting to the question of the number of successes, I am certain that the investigators would have improved on this figure of 7 out of 22 if their series had been more represen-

tative. For looking at their list again, one notes with interest the relatively large number of cases with low pre-thyroid readings: case 2, 153/75; case 3, 163/94; case 5, 157/103; case 6, 168/98; case 7, 148/87; case 8, 167/97; case 9, 145/95; case 15, 168/101; case 21, 160/90. Thus 9 out of 22 or 41% of their cases fall into the group which, as I have indicated, responds poorly to thyroid administration.

And this brings me to my chief criticism of their paper. The number of cases studied is much too small. As stated, the large number with relatively low pressures condemns their sample as unrepresentative. There is however, a more glaring defect still—the absence of patients with blood pressures of the order of 250/150 who are suffering from hypertension. This is an important weakness in their series because it is among these cases that one obtains the best results.

From these considerations it is obvious that their conclusions cannot be taken seriously. Detailed and laboriously compiled statistics based on inadequate data prove nothing.

Pericles Menof.

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Jeppe Street,
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8 September 1953.

GASTRO-OESOPHAGEAL REGURGITATION

To the Editor: I have read with great interest the article on Gastro-oesophageal Regurgitation in your issue No. 35 of 29 August (Werbeloff and Merskey 1953).¹ Since the authors claim that their findings contradict the conclusions reached by my colleague and myself (Lawler and McCreath 1951)² I feel that some reply is warranted.

Two hundred cases were investigated and in one half of the cases the investigators relied on the hospital records for the histories. In our experience histories taken from hospital records are quite unreliable in these cases. Often the patients do not themselves realize that the symptoms are postural. The patient in whom the pain occurs after he has retired will blame some dietary indiscretion committed at the evening meal. Frequently he will attribute the relief he obtains by sitting up to the alkaline mixture or other drink taken after he has assumed the erect position.

Similarly the patient whose symptoms are brought on by bending will attribute the pain to the exertion and not to the posture. This, quite often, leads to a diagnosis of angina of effort. It is clear, therefore, that a carefully taken history is essential in investigating these cases.

In our series every case was interrogated personally by my colleague and myself separately and we certainly did not rely on hospital records for the histories in half of our patients. It is quite true, as stated by the authors, that in the series published by Robins and Jankelson (1926)³ there is no mention of postural symptoms but there is no indication in the article quoted that the patients were ever questioned on this point.

It is also of some importance to remember that these patients have occasional short remissions of symptoms and, if the patient is examined during a symptom-free interval, regurgitation cannot be demonstrated.

The authors claim that the methods used to test regurgitation were those advocated by us. This is not quite correct. A total examination time of 30 seconds in each position is quite inadequate to exclude regurgitation in these cases. Several minutes may elapse before reflux occurs.

We have never advocated coughing as a reliable method of inducing regurgitation. We have not found it effective probably because it raises the intra-thoracic as well as the intra-abdominal pressure. Allison (1951)⁴ pointed out that hiatal hernia is most likely to manifest itself when the difference between the intra-thoracic and intra-abdominal pressure is greatest. This is during deep inspiration. Regurgitation also is most likely to occur when the patient takes a deep breath while in one of the standard positions recommended.

We are aware that the 'double swallow' method has long

been used to show the lower limits of an obstructive lesion of the oesophagus. If, as is implied, this is cited as a proof that reflux can occur in normal persons it can hardly be maintained that a patient with such a lesion is 'normal'.

The authors have produced no proof that this procedure can induce reflux in a normal individual. We have, many times, tried the experiment of giving a mouthful of water to a recumbent patient during the course of a barium-meal examination. In the normal person one occasionally sees a momentary slight reflux of barium into the lower end of the oesophagus. This is quite unlike the free regurgitation of stomach contents filling the oesophagus up to the cricoid sphincter that is seen in the true reflux case. Our contention is that regurgitation can be shown in these patients if they are examined in various positions such as they are likely to adopt during their everyday life and without having recourse to the 'double swallow' method or the procedure advocated by Marchand (1952)³ for raising the intra-abdominal pressure by an inflated rubber bag.

The authors' conclusion that the symptoms described are due to hiatal hernia is not confirmed by our investigations. Every experienced radiologist has seen, during routine chest examinations, quite large para-oesophageal hernias referable to which the patients had no symptoms whatever. As pointed out by Allison (1951) it is only when these para-oesophageal hernias become converted into the 'raised cardia' type that regurgitation occurs and symptoms develop.

To this converted type Allison has given the name 'rolling hernia'. Allison attributed the symptoms in his cases of gastric reflux to oesophagitis and he emphasized the influence of posture on the symptomatology. It is remarkable that the term 'oesophagitis' appears nowhere in your contributors' article.

Our own findings corresponded very closely with those of Allison. We differ from him only in believing that symptoms can be caused by reflux *per se* before the development of any inflammatory changes in the oesophagus. In Allison's own series he could find no endoscopic evidence of oesophagitis in some 20 of his cases.

Our own conclusions may be summarized as follows:

1. That persistent and free regurgitation of gastric contents into the oesophagus is a common cause of dyspepsia, second only in importance to duodenal ulcer.
2. That this regurgitation can occur in the absence of a true fixed or sliding hiatal hernia, although such hiatal hernias do occur in a majority of the cases. (Allison has described a pseudo-hiatal hernia in those cases of reflux in which a true hernia is absent).
3. That a careful personal inquiry into the history of these cases will show that the symptoms are related to posture.
4. That the condition can be demonstrated radiologically in a large proportion of the cases if the recommended technique is used.
5. That, if the condition persists long enough and the patient has a normal or high acid-content in the gastric juice, oesophagitis and oesophageal ulcer will develop.

These conclusions, arrived at during our original investigations, have been amply confirmed by our experience of over 2,000 barium-meal examinations carried out since the original inquiry. I can find no convincing evidence in the article in question to cause us to modify those views.

N. A. Lawler.

101-110 Anchor House,
Cnr. 12th Avenue and Fort Street,
Bulawayo.
9 September 1953.

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AN OPHTHALMOLOGIST'S QUESTION

To the Editor: I wonder if G.P., who writes about the Specialists' Register in your issue of 29 August, would be good enough to write again to the *Journal*—I cannot communicate with him directly because he has not given his name and address—and tell us how the ophthalmologist would fit into his conception of a consultant's register. I happen to be one, and so I am naturally interested.

A very large proportion of an ophthalmologist's patients come to him for refraction. To misquote an eminent golfer, 'You operate for show but you refract for dough'. A consultant's register would mean, if enforced in the manner I understand G.P. to contemplate, that such patients, who are not normally ill, would have to go to their family doctor for his recommendation every time they wished to have their eyes tested by an ophthalmologist; that the ophthalmologist would then be obliged formally to refer the patient back to the general practitioner and that it would not be permissible for a patient to be referred to an ophthalmologist by an optician except through the intermediary of a general practitioner.

I wonder if this is really such a good idea. It would mean, for instance, that every time a refraction is done, the patient would have to attend the specialist at least once and his general practitioner twice. If the general practitioner contemplates making a charge for these visits I can foresee some dissatisfaction among his patients. If he does not, then I am afraid he must resign himself to a considerable overcrowding of his waiting room with presbyopes, myopes and so forth who are in need of more or less recurrent refractions.

G.P.'s colleagues in Great Britain at present have to do a good deal of referring of patients for refraction within the National Health Scheme, and are not notably enthusiastic about the privilege. I feel sure that they, at any rate, would be very willing to forego the additional privilege of seeing the patient yet again after he has been to the ophthalmologist.

The sequel is obvious. The ametropic patient is not likely to take kindly to all this palaver whenever he wants his eyes tested. It is often quite difficult for him to get time off from work even for one visit. So what would he do? Go round the corner to the nearest sight-testing optician of course. Again, is this such a good idea?

Perhaps G.P. has a solution for these difficulties? Personally I can see only one if the register of specialists becomes a register of consultants, and that is to make an exception in the case of the ophthalmologist. But then G.P. tells us that exceptions make bad laws.

Lucas Young.

209-211 S.A. Mutual Buildings,
Church Street,
Pietermaritzburg.
9 September 1953.

RESIDENT POST-GRADUATE COURSES IN OBSTETRICS AND GYNAECOLOGY, UNIVERSITY OF CAPE TOWN

To the Editor: I wish to draw the attention of your readers to a refresher course for general practitioners conducted by the Department of Obstetrics and Gynaecology of the Cape Town Medical School. It is a resident course running over one week for which a nominal fee is charged.

Recently I had the privilege of attending this course and I can assure anyone with an interest in the practice of obstetrics and gynaecology that they would find it most interesting and stimulating. Prof. Louw and his whole staff were very friendly and helpful and did everything to make my stay worth while. I can sincerely recommend this course.

P. D. Nel.

61 Meiring Street,
Worcester, C.P.
11 September 1953.

[Particulars of these courses were published in this *Journal*, 4 July 1953, p. 573. Enquiries should be directed to the Registrar, University of Cape Town, Private Bag, Rondebosch, Cape.—Editor.]



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1. All copy should be typewritten (double or preferably triple spaced) with wide margins.
2. Tables, references, graphs, illustrations and legends for illustrations should be clearly identified and prepared on separate sheets.
3. All photographs should be glossy prints unmounted, untrimmed and unmarked. Authors' suggestions for trimming, etc., are most suitably indicated on a duplicate print or diagram.
4. In no circumstances should original X-ray films be forwarded. Glossy prints must be submitted.
5. Line drawings should be on white board, arranged to conserve vertical space. All lettering in diagrams and graphs should be indicated clearly in soft lead pencil, preferably on a duplicate specimen or diagram in rough. In no circumstances should lettering be inked in or typewritten on the figure or the graph. Illustrations should not exceed 12 inches x 18 inches in size.
6. Figure numbers should be marked clearly on the back of each illustration, and in every case the top of the illustration should be indicated.
7. A limited but reasonable amount of illustrative and tabular matter is allowed free. Additional material of this sort may be allowed at cost, at the discretion of the Editor.
8. All references to the literature should be inserted in the text as a superior number and listed at the end of the article in numerical order.
9. References must conform to the following convention (journal titles being abbreviated according to the *World List of Scientific Periodicals*):—
White, J. and Brown, A. B. (1946): *Arch. Clin. Med.*, 123, 167.
Books should be cited as follows:—
Smith, J. (1946): *An Introduction to Medicine*, 2nd ed., p. 174
Cape Town: John Black, Ltd.
10. All numerals to be printed as figures (i.e. not spelt out). For 'one' or 'I' always follow copy. All numerals always to be spelt out in full at the beginning of a sentence.
11. Cubic centimetre as c.c.; Cubic millimetre as c.mm.; 7.11.46 as 7 November 1946; 2nd as second; 10/6 as 10s. 6d.; Per cent. as %; 1" as 1 inch; B.P. 140/80 as Blood pressure, 140/80 mm. Hg.
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13b. Corrections, other than typographical errors, will be charged to the author. It is therefore most important that the MS. be submitted in its final form.
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(1387) Boland. Nucleus praktyk en goeie voorraad instrumente, ens. teen £400. Uitstekende vooruitsigte vir uitbreiding.

(1399) Transkei. Unopposed prescribing practice. Receipts 1950/51/52—£3,887 18s. 10d., £4,814 2s., £5,064 5s. 6d. Two appointments. Practically no night work. Premium required for goodwill £2,000. Large house for sale at £3,000. Terms possible.

(1424) Westelike Provinsie. Praktyke met uitstekende vooruitsigte. Besonderhede op aanvraag.

(1434) South Western Cape. Well-established dispensing practice. Receipts £3,755 p.a. £3,500 required for house, practice, drugs, surgery furniture and some instruments. Bond and terms available. Three appointments.

(1436) Goedgevestigde Karoo-praktyk. Ontvangste ongeveer £3,000 p.j. D.S. en M.O.H. aanstellings. Koopprijs £1,500 wat voorrade insluit. Gerieflike woning met spreekkamers beskikbaar teen besonder billike huurgeld.

(1437) Prescribing practice in Transkei 90% native and therefore cash. Gross takings over £2,000 p.a. including contract of approximately £150 p.a. Little night or week-end work, definite scope for expansion. No surgery and little maternity done. Easy travelling distance from sea. Surgery for hire at £5 p.m. Owner going overseas and therefore prepared to sacrifice at £600 for quick sale.

(1445) Suidwes-Kaapland hospitaaldorp. £1,150 vir praktyk, instrumente, spreekkamermeubels, medisynesoortrade. Terme beskikbaar. Huis te koop of te huur. Vooruitsigte uitstekend.

(1446) Transkei. Well-established prescribing practice in beautiful and pleasant township with mild climate. Electricity. Waterborne sanitation. Easy reach of sea. Cash receipts: 1951-52—£3,022, £3,600. Premium required £650. House for sale. Bond can be arranged.

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(1444) Noord Kaapland. Assistent dadelik benodig met oog tot vennootskap. £75 p.m. plus kartoelae.

(1443) Eastern Province. Locum from ± 14 December to ± 31 December. Salary £2 12s. 6d. per day plus board and lodging and car allowance. Preferably man.

(1438) Boland. Locum from ± 15 December 1953 for 1 year. Later possibility of assistant- or partnership. Salary offered £3 3s. per day. Preferably own car. Partnership practice.

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(P/O24) Randse hospitaaldorp. Premie £1,500 en terme kan gereel word. Dit is 'n goedgevestigde praktyk en alleen persone met ondervinding in chirurgie sal in aanmerking geneem word, vandaar die lae premie.

(P/O25) Transvaal hospital town. Jewish partner is required. Well-established practice with an average annual income of over £5,000. All surgical facilities. Premium required is £2,000 and easy terms could be arranged.

PRAKTYKE TE KOOP : PRACTICES FOR SALE

(Pr/S82) Excellent non-European practice near Johannesburg Established in 1944. Average annual net income £2,700 cash. Premium required is £2,000 and terms can be arranged. Premium includes contents of surgery and maternity ward.

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(Pr/S84) Pleasant town in Northern Transvaal, with hospital facilities. General practice which was run by seller for 10 years besides a large non-transferable mine appointment. The appointment did not allow time for any Native work—only for very few district calls. Net cash income over £1,200 per

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(Pr/S85) Progressive Transvaal dispensing practice. Excellent surgical facilities. Average gross income £3,500 per annum. Premium required £2,500 and the following terms could be arranged: £1,250 deposit and the balance over a period of 18 months, starting 3 months after cash payment. The premium includes drugs, furniture and fittings, estimated at £800. Two transferable appointments worth £230 per annum. Scope for expansion.

(Pr/S87) Wes-Transvaal. Uitstekende praktyk. Gemiddelde jaarlikse inkomste oorskry £3,000. Woonhuis en spreekkamers te koop of te huur teen £14 en £11 per maand, onderskeidelik. Premie verlang is £1,500 en terme kan gereël word. Skryf om volle besonderhede.

(Pr/S88) O.V.S. Algemene praktyk met D.G. aanstelling. Geen opposisie. Jaarlikse inkomste ongeveer £3,500. Premie van £1,750 sluit in groot voorraad medisyne, instrumente en meubels. Hierdie is ook 'n ougevestigde praktyk.

(Pr/S89) Excellent Pretoria practice, chiefly European. Annual gross income £3,600. Premium £900 for a quick sale, and easy terms could be arranged.

(Pr/S90) Transvaal. Uitstekende praktyk in hospitaaldorp. Twee aanstellings. Inkomste oorskry £5,000. Ideale praktyk vir 2 geneesher. Premie verlang is £2,500 en sluit medisyne, voorraad en instrumente in.

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PRACTICES FOR SALE - PRAKTYKE TE KOOP.

(PD15) General practice established 1941 at pleasant residential and seaside resort about 10 miles south of Durban. Annual income approximately £1,000. No major surgery, minimum of minor surgery and only emergency midwifery being done at present. Brick house with consulting room attached, for sale at £5,250. Owing to ill health owner wishes to retire from practice as soon as possible. Premium £1,000 including drugs, surgery and dispensary furniture.

(PD20) Natal South Coast. General mixed prescribing practice. Premium £1,000 plus £200 for full equipment of 2 surgeries. Large proportion of the patients are European visitors, and Indians. A lucrative Native practice could be built up if dispensing was carried out. Immediate introduction.

(PD21) East Griqualand. General mixed practice with net profit of £3,000 annually. Premium £1,900, terms if required. Excellent opportunity for newly qualified practitioner.

(PD22) Natal. Prescribing and dispensing country practice. Total gross receipts for 1951, £3,344 15s. 9d.; 1952, £2,817 10s. 6d.; 1953 (3 months), £846 6s. 10d. Premium £1,500, includes drugs, consulting room furniture and instruments. House for sale £5,500.

(PD23) Natal. Prescribing practice particularly suitable for a woman doctor interested in obstetrics and gynaecology. Total gross receipts for 1950, £1,570; 1951, £1,595; 1952 (6 months), £1,340; 1953 (3 months), £382. Premium £1,250, includes furniture, fittings, instruments, drugs and existing book debts.

(PD24) Natal South Coast. Practice suitable for doctor who does not want full time work. £250 for drugs, dressings, instruments, etc. No charge for goodwill. Small house on 1 morgen, £1,600. Immediate occupation.

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(PDx) Durban. General practitioner offers 45% partnership on 18 months' purchase. Applicants should be experienced and be able to put down a certain amount of capital.

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Provincial Administration of the Cape of Good Hope

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Applications are invited from suitably qualified persons for appointment to the above post.

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The conditions of service are prescribed in terms of the Hospital Board Service Ordinance No. 19 of 1941, as amended from time to time, and the regulations framed thereunder.

The appointment will be on contract for 2 years in the first instance and may be renewed 12 months at a time up to a maximum of 4 years. The appointment may, however, be terminated by 3 months' notice, in writing, on either side.

Applications should be submitted, in duplicate, on the prescribed form (Staff 23), which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or the Medical Superintendent of any Provincial Hospital or Secretary of any School Board in the Cape Province.

The completed application forms should be addressed to the Medical Superintendent, Wynberg, Orthopaedic and Convalescent Hospitals, P.O. Box 1487, 58 Loop Street, Cape Town.

The closing date for receipt of applications is 14 October, 1953. (A560605)

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HOSPITALS DEPARTMENT

HOSPITAL BOARD SERVICE: VACANCIES

1. Applications are invited for the following vacant posts:

<i>Institution</i>	<i>Post</i>	<i>Emolu- ments</i>	<i>Closing date</i>	<i>Applications must be addressed to:</i>
<i>Conradie Hospital, Pinelands</i>	Medical Practitioner, Grade B.	£720 x 40 960 p.a.	24.10.53	The Medical Superintendent, Conradie Hos- pital, Pinelands.
<i>Somerset Hospital, Green Point</i>	Medical Practitioner, Grade A.	£500 600 660 720 p.a.	9.10.53	The Medical Superintendent, Somerset Hospi- tal, Beach Road, Green Point.

2. The conditions of service are prescribed in terms of Hospital Board Service Ordinance No. 19 of 1941, as amended, and the regulations framed thereunder.

3. In addition to the scale of salary indicated a cost-of-living allowance at rates prescribed from time to time by the Administrator is payable to whole-time officials and employees.

4. In connection with the post at the Conradie Hospital, a house will be available for the successful candidate, if married. A rental will be charged at the rate of 12½% of his total emoluments. If the successful candidate is unmarried board and quarters will be available at a charge of £148 per annum.

5. The successful candidates, if not already in the Hospital Board Service, will be required to submit satisfactory birth and health certificates.

6. Application must be made on the prescribed form (staff 23) which is obtainable from the Director of Hospital Services, P.O. Box 2060, Cape Town, or from the Medical Superintendent of any Provincial Hospital or Secretary of any School Board in the Cape Province.

7. Candidates must state the earliest date on which they can assume duty.

(A562748)

Tristan da Cunha—Medical Officer

Doctor required for general medical duties on South Atlantic Island of Tristan da Cunha.

Appointment would be on agreement for 2 years. Salary £1,200 a year. No income-tax. Free quarters provided equipped with heavy furniture, for which a small rental may be charged. Free passages provided for Officer, wife and up to 3 children to and from the Island. Generous home leave granted after tour. Private practice is not permitted. Special importance will be attached to suitability of personal qualities for service in this small, remote but distinctive community.

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Provinsiale Administrasie van die Kaap die Goeie Hoop

HOSPITAALDEPARTEMENT

HOSPITAALRAADSDIENS: VAKATURES

1. Aansoeke word ingewag om die volgende vakante poste:

<i>Inrigting</i>	<i>Pos</i>	<i>Emolu- mente</i>	<i>Sluitings- datum</i>	<i>Aansoeke moet gerig word aan:</i>
<i>Conradie- hospitaal, Pinelands</i>	Geneesheer, Graad B.	£720 x 40— 960 p.j.	24.10.53	Die Mediese Super- intendent, Con- radie-hospitaal, Pinelands.
<i>Somerset- Hospitaal, Groenpunt</i>	Geneesheer Graad A.	£500—600 —660— 720 p.j.	9.10.53	Die Mediese Super- intendent, Somers- et-Hospitaal, Beachweg, Groen- punt.

2. Die diensvoorwaardes word voorgeskryf ingevolge die Ordonnansie op Hospitaalraadsdiens nr. 19 van 1941, soos gewysig, en die regulasies wat daarkragtens opgestel is.

3. Benewens die salarisskaal soos aangedui is 'n lewenskoste-toelae betaalbaar aan voltydse beamptes en werknemers teen bedrae wat van tyd tot tyd deur die Administrateur vasgestel word.

4. In verband met die pos by die Conradie-hospitaal sal 'n huis vir die suksesvolle kandidaat beskikbaar wees indien hy getroud is. Huurgeld teen 12½% van sy totale besoldiging sal betaalbaar wees. Indien die suksesvolle kandidaat onge-troud is sal kos en inwoning vir hom beskikbaar wees teen 'n koste van £148 per jaar.

5. Die geslaagde kandidate, indien nie reeds in die Hospitaal-raadsdiens nie, moet bevestigende geboorte- en gesondheid-sertifikate indien.

6. Aansoek moet gedoen word op die voorgeskrewe vorm (staf 23) wat verkrygbaar is by die Direkteur van Hospitaaldienste, Posbus 2060, Kaapstad, of by die Mediese Superintendent, van enige provinsiale hospitaal of by die Sekretaris van enige Skoolraad in die Kaapprovinsie.

7. Kandidate moet die vroegste datum meld waarop hulle diens kan aanvaar.

(A562748)

Praktik te Koop

Praktik te koop. Noord Natal. Geen opposisie. Bruto inkomste £3,500 sluit in D.G. aanstelling en groot naturelle kontant inkomste. Premie van £1,800 sluit medisyne, instrumente en meubels in. 'n Woonhuis met 9 vertrekke en spreek-kamers met 7 vertrekke, eie ligte installasie en waterpomp vir £3,200. Totaal £5,000. Verkoop om gesondheidsredes. Kontant verkies maar voorstelle tot terme sal oorweeg word. Skryf aan 'A. S. D.', Posbus 643, Kaapstad.

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Outstanding opportunity for energetic doctor. Unopposed European and non-European cash practices in large expanding areas. Situated in Retreat and Cape Flats. Apply 'A. S. K.', P.O. Box 643, Cape Town.

Wanted

General practitioner desires to purchase a practice in Park-town. Only minor surgery to be undertaken. Please reply 'A. S. L.', P.O. Box 643, Cape Town.

Locum or Assistant Available

Experienced general practitioner (Edinburgh, M.B., Ch.B.) available immediately as locum or assistant. Write 'A. S. M.', P.O. Box 643, Cape Town.

Applications Asked for Medical Superintendent

Applications are hereby asked on prescribed form Z.83 for a Medical Superintendent at the Provincial Hospital, Bethlehem at a salary scale £1,000 x 30—£1,150 per annum plus a non-pensionable house allowance of £180 p.a. plus living cost allowance subject to review from time to time.

Applicants must be bilingual European South African citizens; and qualified as doctor and registered with the S.A. Medical Council. State earliest date when duties can be assumed.

Applications must be supported by birth and health certificates. The successful applicant will be appointed for a probationary period of 12 months and except for his Administrative and clinical work as Medical Superintendent he has also to perform the following duties:

1. Medical examination of all newly appointed hospital staff.

2. Has the full control of the Radiological Department, Hospital Dispensary and the allocation of beds and theatres.

3. Is responsible for the treatment of 20 medical free patients (daily).

The appointment is subject to Regulations governing the Bethlehem Hospital as amended, the O.F.S. Hospital Ordinance as amended and the O.F.S. Hospital Officials Pension Regulations as amended.

Applications marked 'Medical Superintendent' to reach the undersigned not later than 10 October 1953.

P. G. Joubert
Secretary

Provincial Hospital
Bethlehem

(A688748)

Aansoeke Gevra vir Geneesheer-Direkteur

Aansoeke word hiermee gevra op voorgeskrewe vorm Z.83 vir 'n Geneesheer-Direkteur by die Provinsiale Hospitaal, Bethlehem, teen 'n salarisskaal van £1,000 x 30—£1,150 per jaar plus nie-pensioendraende huisloelae van £180 per jaar plus lewenskoste wat onderworpe is aan hersiening van tyd tot tyd.

Applikante moet tweetalige blanke Suid-Afrikaanse burgers wees; en gekwalifiseerde geneesheer geregistreer by die S.A. Mediese Raad. Meld vroegste datum waarop dienste aanvaar kan word.

Applikasies moet vergesel wees van geboorte- en gesondheidsertifikate. Die suksesvolle applikant word vir twaalf maande op proef aangestel en moet Administratiewe kliniese werk waarneem en behalwe sy Administratiewe plige as Geneesheer-Direkteur ook die volgende dienste doen:

1. Mediese ondersoek van alle nuwe amptenare by Hospitaal.

2. Is in volle beheer van Radiologiese Afdeling, Hospitaal Aptek en indeling van bedde en teaters.

3. Is verantwoordelik vir behandeling van 20 Mediese vry pasiënte (daaglik).

Die aanstelling is onderhewig aan—die Regulasies, Bethlehem Hospitaal, soos gewysig, die O.V.S. Hospitaal Ordonnansie soos gewysig en O.V.S. Hospitaalamptenare Pensioen Regulasies soos gewysig.

Applikasies gemerk 'Geneesheer-Direkteur' moet ondergetekende nie later as 10 Oktober 1953 bereik nie.

P. G. Joubert
Sekretaris

Provinsiale Hospitaal
Bethlehem

(A688748)

Transvaalse Provinsiale Administrasie

VAKATURES BY PUBLIEKE HOSPITALE

Aansoeke word ingewag van kandidate met geskikte kwalifikasies vir die onderstaande poste by Publieke Hospitale in die Transvaal.

Aansoeke moet gerig word aan die Geneeskundige Superintendent of Verantwoordelike Geneesheer van die betrokke hospitaal en moet volle besonderhede bevat aangaande die ouderdom, professionele, akademiese en taalkwalifikasies, onderwinding en huwelikstaats van die applikant en moet voorts 'n aanduiding bevat van die vroegste datum waarop diens aanvaar kan word.

Lewenskostetoelae tans betaalbaar aan voltydse werknemers:

Salaris	Lewenskostetoelae	
	Getroud	Ongetroud
Oor £350 p.j.	£320 p.j.	£100 p.j.

Van persone wat aangestel word, sal verwag word om bevredeigende sertifikate in te dien, asook om hulle te onderwerp aan 'n geneeskundige ondersoek by die betrokke hospitaal.

Aansoek vorms is verkrygbaar van enige Transvaalse Publieke Hospitaal of die Provinsiale Sekretaris, Afdeling Hospitaaldienste, Posbus 2060, Pretoria.

Benewens jaarlikse salaris en lewenskostetoelae ontvang voltydse werknemers spoorwegkonsessie en word verlof toegestaan ooreenkomstig die hospitaal verlofregulasies.

Die sluitingsdatum van aansoeke vir die poste is 5 Oktober 1953.

Hospitaal	Vakature	Salarisskaal	Opmerkings
Baragwanath en die Universiteit van die Witwatersrand	Mediese Registrateur	£620—780 —820—860	Geregistreerde mediese praktisyn.
Barberton	Radioloog	£1,800	Geregistreerde mediese praktisyn. met D.M.R. Bekleër sal Standerton en Ermelo se hospitale een keer per week moet besoek.
Boksburg-Benoni	Ongevalle Beampte	£620—780 —820—860	Geregistreerde mediese praktisyn.
Coronation en die Universiteit van die Witwatersrand	Deeltydse Assistent Ginekoloog en Verloskundige (1)	£513	Geregistreerde mediese praktisyn met onderwinding in Ginekologie en Verloskunde. 2½ sessies per week.
	Assistent Kindergeneeskundige (1)	£1,200 x 50 —1,500	Geregistreerde mediese praktisyn met onderwinding in kinder-geneeskunde.
Edenvale, P.K. Raedene	Ongevalle Beampte	£620—780 —820—860	Geregistreerde mediese praktisyn.
Krugerdsdorp	Ongevalle Beampte	£620—780 —820—860	Geregistreerde mediese praktisyn.
Ontdekkers Gedenk, P.K. Florida	Deeltydse Algemene Praktisyn Geneesheer	£255	1½ sessies per week.

(42425)

Union Corporation Group of Companies

VACANCY FOR ASSISTANT MEDICAL OFFICER

Applications are invited from medical practitioners for the abovementioned post. The work is full time and consists of the care of Native employees of the abovementioned Group of Companies.

The commencing salary is dependent upon the qualifications and experience of applicants and will be between £900 and £1,020 per annum, plus cost-of-living, transport and housing allowances. Membership of the Mine Officials Pension Fund and the Mines Benefit Society is obligatory.

Applications giving full particulars of qualifications and experience, and stating whether applicants are married or single, should be addressed to Union Corporation, Limited (Companies Department), P.O. Box 1125, Johannesburg.

(This appointment has the approval of the Medical Association of South Africa.—*Assistant Secretary, M.A.S.A.*)

2 September 1953

Motor Industry Sick Benefit Fund

(TRANSVAAL AND ORANGE FREE STATE)

PART-TIME MEDICAL OFFICER FOR BRITS

Applications are invited from fully qualified registered general practitioners in respect of the abovementioned appointment.

The Fund operates on the closed panel system and the successful candidate will be required to provide consulting room, domiciliary and hospital service (when necessary) for members and their dependants.

Further details will be furnished on request.

Applications must reach the Secretary of the Fund, P.O. Box 8477, Johannesburg, by Friday, 2 October 1953.

(Before submitting applications for this post, practitioners are advised to communicate with the Hon. Secretary, Northern Transvaal Branch, M.A.S.A., Room 28, Administrative Building, General Hospital, Pretoria.—*Assistant Secretary, M.A.S.A.*)

Part-time Medical Officer

Applications are invited from registered medical practitioners for the abovementioned position at the Wemmershoek Dam Project.

Details of the duties and fees attached to the position may be obtained from the undersigned, to whom applications must be submitted before noon on 12 October 1953.

Works Manager, George Wimpey & Co. Ltd., Poste Restante, Zuider Paarl, C.P.

(This appointment has the approval of the Medical Association of South Africa.—*Assistant Secretary, M.A.S.A.*)

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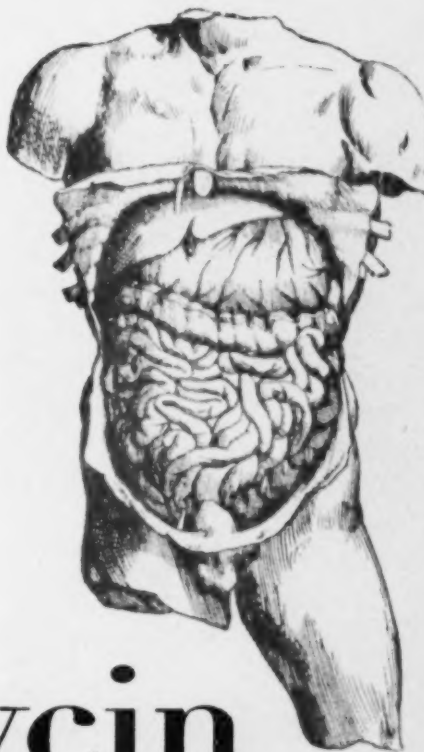
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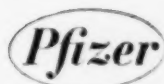


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